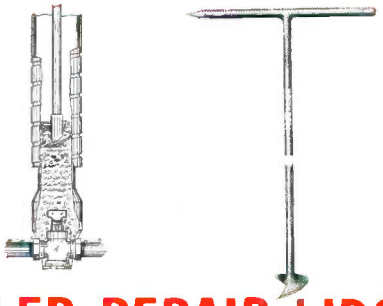
MUELLER RECORD

SEPTEMBER • 1949 • OCTOBER

RECONDITION YOUR SERVICE BOXES WITH MUELLER MATERIALS

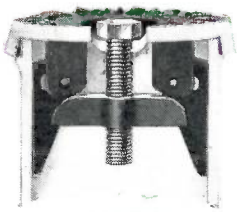
FIRST CLEAN THEM OUT WITH A MUELLER H-10330 CLEANOUT AUGER



THEN FIT THEM WITH NEW MUELLER REPAIR LIDS

FOR NEW STYLE BUFFALO BOX

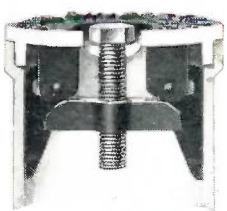
H-10373
Size 2½"



H-10373
Installed

FOR OLD STYLE BUFFALO BOX

H-10374
Sizes 2½", 3"



H-10374
Installed

BECAUSE MUELLER REPAIR LIDS FIT ANY CONDITION

LOST LID

BROKEN LUG

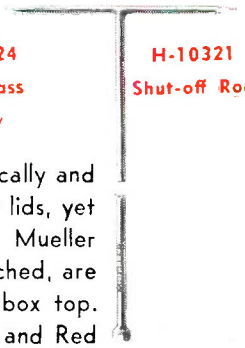
BROKEN TOP

AND CHECK YOUR STOCK OF THESE

H-10323
Malleable Iron
Pentagon Key

H-10325
Cast Steel
Pentagon Key

H-10324
Red Brass
Screw



H-10321
Shut-off Rod

Now is the time to recondition those Service Boxes and you can do it easily and economically and actually make them as good as new. The boxes may have broken lugs, broken tops or lost lids, yet any of these conditions are successfully taken care of. Just clean them with the Mueller Service Box Clean-out Auger and attach a Mueller Repair Lid. These lids are easily attached, are practically impossible to pry off and they set flat on the box top. It's also a good idea to check your stock of Pentagon Keys and Red Brass Screws and order at the same time along with Repair Lids.

DEPENDABLE SINCE 1857 — FULLY WARRANTED — OUR 92nd YEAR

MUELLER CO.

MAIN OFFICE AND FACTORY.....DECATUR, ILLINOIS
OTHER FACTORIES: *Los Angeles, Cal.; Chattanooga, Tenn.; Sarnia, Ont. Canada*

MUELLER RECORD

Published
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MUELLER CO.

PLUMBING, WATER AND GAS PRODUCTS

MAIN FACTORY AND OFFICE
Decatur, Illinois
PACIFIC COAST FACTORY
Los Angeles, Calif.
COLUMBIAN IRON WORKS
(Hydrant and Valve Division)
Chattanooga, Tenn.
CANADIAN FACTORY
MUELLER, LTD.
Sarnia, Ontario
BRANCHES
New York, San Francisco

September • 1949 • October
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GENE J. KUHN, Editor

CONTENTS

COVER

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MOSTLY PERSONAL

DURING THE late, great war we had occasion to stop over at Honolulu for a couple of days, courtesy U.S. Navy, and although we were more concerned with several other matters at the time, we naturally supposed the city's water supply came from the mountains back of Honolulu. This assumption was correct as far as it went, we learned during a conversation with Gordon D. Brown, Honolulu's superintendent of maintenance, at the A.W.W.A. convention in Chicago, but that was only part of the story.

Actually, Honolulu has such a unique water supply arrangement that we asked Mr. Brown if he would take time to send us some additional information when he returned to Hawaii. The article on page 3 is the result.

Honolulu, like most American cities, has its growth problems. Ten years ago, the city had 22,528 water customers; today there are 31,482. Pumpage in 1940 was 20½ million gallons per day; today's average daily pumpage is 32½ million gallons.

We wondered what effect the Japanese attack on Pearl Harbor had on the city's water department. None, directly, Mr. Brown tells us. Pearl Harbor operates its own water system. However, during the war, the city's plants were guarded by the Army. Biggest single

(Continued on page 20)

Koolau mountains, back of Honolulu, figure prominently in city's water supply. Moisture-laden tradewinds are swept up by the mountains into cooler air strata and moisture condenses as rain.

HONOLULU

By GORDON D. BROWN
Supt. of Maintenance, Board of Water Supply, City and County of Honolulu

Tradewinds, mountains and caprock combine to make its water source one of the world's natural wonders.

IN ITS WATER SOURCE, Honolulu, capital city of the Territory of Hawaii, possesses one of the world's great natural wonders.

It is unique in its physical structure and natural operation; there is none other just like it anywhere in the world, so far as is now known.

Gordon D. Brown

Honolulu's water literally enters the backyard and comes out of the frontyard, the backyard being the Koolau mountains at the rear of the city and the frontyard the foundation of the city. Honolulu is actually built over artesian areas from which its water is obtained.

The presence of this source of water supply is due to three gifts of nature, lacking any one of which a city of Honolulu's location and population, almost 300,000, could not exist.

These three creations of nature are the prevailing tradewinds from the northeast, the Koolau mountain range, and the coastal caprock, which fringes the Pacific on the city's oceanside boundary.

The moisture-laden tradewinds are swept against the northeast side of the Koolaus and, rising to higher and cooler air strata in their journey across the mountains, are forced by the natural process of condensation to drop the moisture in the form of rain.

The rain falls on Honolulu's watershed, a mountain area of about 25 square miles ranging in elevation up to 3,150 feet and lying from four to six miles back of the business district. Part of this rain water, aside from that which flows to the sea in small surface streams and other quantities which are absorbed by plants and by evaporation, seeps downward through porous strata of lava which constitute a large part of the island of Oahu's volcanic structure.

In its subterranean movement, flowing through the pervious rocks, the water finally finds its way into strata which lie beneath the caprock. The caprock is a thick layer of impervious soil, largely composed of clay and other watertight materials, washed down by surface water flow and also deposited by ocean action, at different ocean levels, during many thousands of years, perhaps as many as 200,000. The age of Oahu itself is estimated by geologists at from two to five million years.

The caprock, at the coastline from 1000 to 1200 feet thick and extending for a considerable distance out to sea on the ocean floor, reaches inland one to two miles, gradually becoming thinner, to a contour elevation of approximately 100 feet above sea level on its mountain side boundary.

Captured and confined by this formation, the continuous downward flow of water through the mountain strata creates sufficient pressure at the present time to force it up through artesian wells, drilled through the caprock, to a head of 28 feet above sea level.

Salt water from the ocean also seeps into the porous lava underlying the caprock. However, as salt water is heavier than fresh water, the rain water from the mountain floats upon, or is "perched" upon, the ocean water.

The presence of artesian water on Oahu was first proven in 1879, when a

flowing well was brought in on a ranch in the Ewa district, 20 miles out of Honolulu. The first well in Honolulu was brought into production in 1880.

Prior to this "discovery" period, Honolulu was entirely dependent for its water on shallow ground surface wells and surface streams and springs. This water was potable but not palatable!

The purity of Honolulu's artesian water has frequently and regularly been certified by the United States Public Health Service, and to safeguard that purity the system maintains as part of its establishment three laboratories, bacteriological, chemical, and geological.

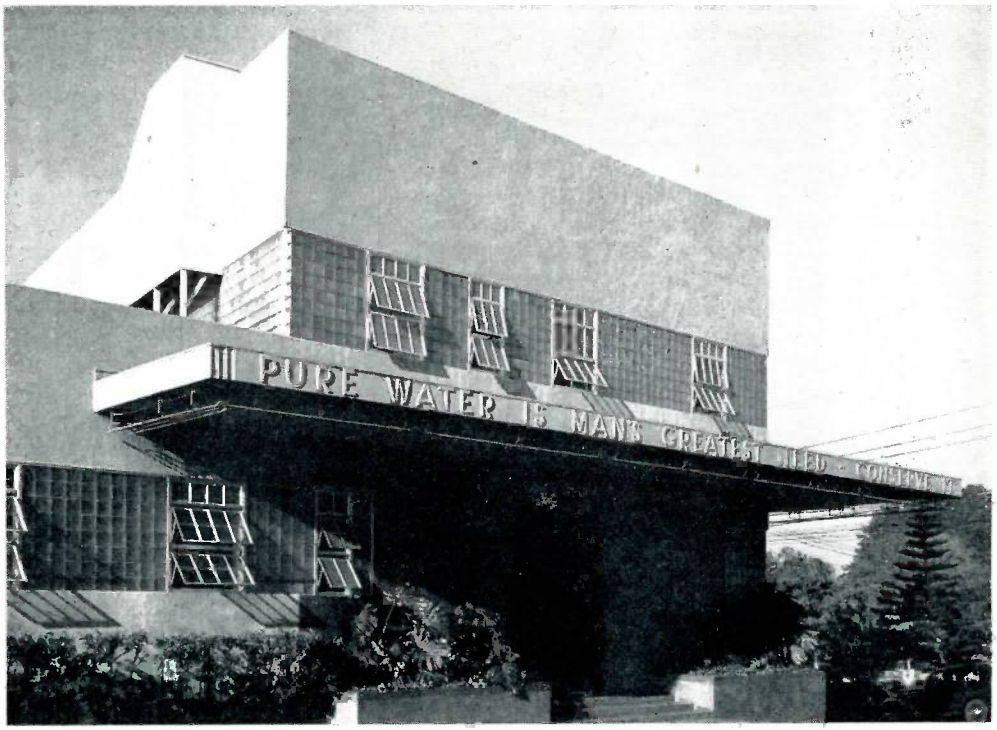
About 40 per cent of the water now produced by Honolulu's public system comes from 25 artesian wells, 200 to 600 feet deep, and is forced through the mains and into the reservoirs of the distribution system by three steam pumping plants, all located within the metropolitan district. These three stations now produce and distribute about 14,200,000 gallons of water every 24 hours.

However, because of the great depth of the wells, there is a possibility that lowering of the artesian head might cause destructive intrusion of salt water.

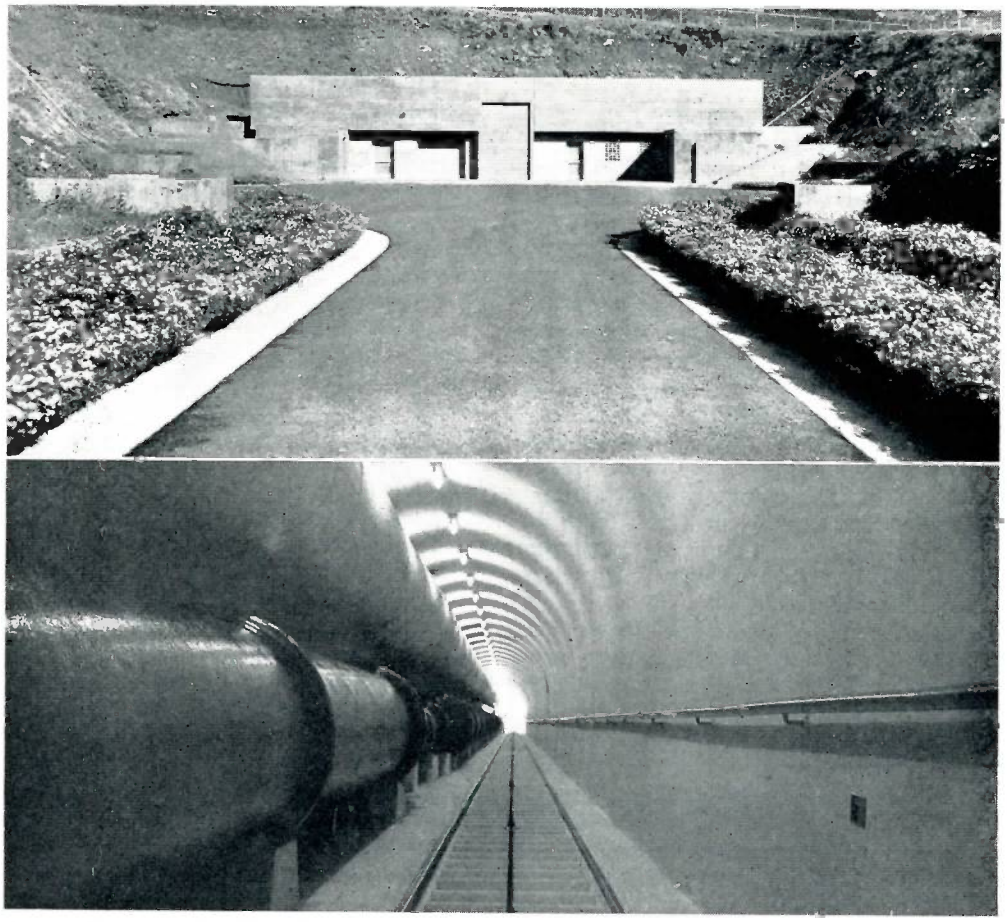
Frederick Ohrt, manager and chief engineer, executive head of the municipal water system since 1925, and the man principally responsible for the design of the existing system, is authority for the statement that deep artesian wells are becoming obsolete and that in future years they will be sealed and abandoned, to be succeeded by underground pumping stations.

Honolulu's system now includes three underground stations. Work on these stations begins at an elevation of about 165 feet above sea level and therefore above the caprock, and inclined shafts are driven down to the water surface, generally about 25 feet above sea level, where electric pumps are installed, and water is gathered in horizontal collection tunnels which are driven into the water-bearing lava strata at about sea level.

Water from the underground stations, coming from the top of the main ground water body instead of from near the bottom, as it does in the deep artesian wells, makes it less subject to the effects of salt water intrusion. The water is



A view of the entrance to the administrative and engineering offices of the Board of Water Supply, Honolulu. The Board was created by an act of the Territorial Legislature in 1929.



Upper photo: portal of North Halawa Valley underground pumping station, one of three such stations in Honolulu's water system, which are succeeding artesian wells as a source of supply. Lower photo shows the shaft of the pumping station, looking up from the pump room.

from the same original source, the rainfall on the mountain watershed, but being tapped from an elevation above the caprock extension it does not rise to the surface from pressure but must be pumped. The three underground stations now in service produce about 18,300,000 gallons of water every day.

High level mountain tunnels and developed springs also bring some water into Honolulu's distribution system, but relatively a small amount, the average daily production from these sources in 1948 being only 2,500,000 gallons.

Army and Navy and privately operated wells in Honolulu, most of the latter owned by industrial concerns, now produce about 19,700,000 gallons a day.

Of the total average water production of 54,700,000 gallons a day, 7,500,000 gallons is diverted to naval installations outside the city, placing Honolulu's daily consumption at 47,200,000 gallons.

In operation for more than 100 years, Honolulu's water system is one of the oldest under the American flag west of the Mississippi river. The first unit, a lead pipe conveying water from a small reservoir a mile inland to the waterfront for supplying whaling ships, was in operation March 31, 1848.

The system was subsequently developed by the Kingdom of Hawaii until 1893, by the Republic of Hawaii until 1900, and by the Territory of Hawaii until 1913, when it was transferred to the City and County of Honolulu.

The Board of Water Supply, now in charge of operations, actually had its genesis in 1925, when the Territorial Legislature created the Honolulu Sewer and Water Commission "to expedite and

complete the sewer and water system, and to insure its adequacy and to safeguard the watersheds and artesian basins of Honolulu."

Mr. Ohrt was appointed chief engineer of the Commission and has ever since been associated with the water system, since 1930 as manager and chief engineer.

The present Board of Water Supply was created by the Legislature of 1929 and assumed control of the system February 1, 1930. It is an autonomous, nonpolitical body of seven members, five of whom are appointed to staggered five-year terms by the Mayor, with the approval of the Board of Supervisors, and two of whom, the Superintendent of Public Works, Territory of Hawaii, and the Chief Engineer, Department of Public Works, City and County of Honolulu, are ex-officio members, all serving without compensation.

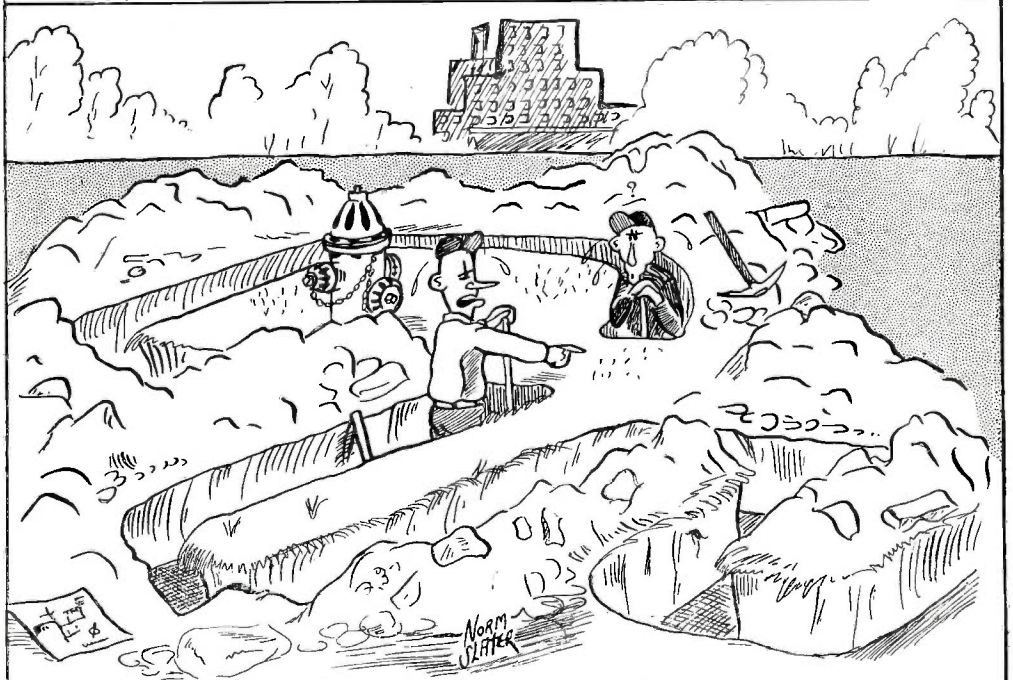
Under the territorial law which created it, the water system operates on a self-supporting basis, all expenses being met by payments for water services; it receives nothing from general tax funds. The Board has authority to fix water rates and to authorize and issue bonds to finance plant expansions.

It should be explained that the service of the Board of Water Supply is limited to the metropolitan district of Honolulu. The rural districts of the island of Oahu are served by the Suburban Water System, which is under the direct control of the City and County government and entirely separate and distinct from the operations of the Board of Water Supply.

Representing an investment of more than $20,000,000, Honolulu's water system is served by three steam pumping plants, three underground pumping stations, 15 electrically operated booster pumping stations, 27 equalizing reservoirs with a total capacity of 20,610,000 gallons, two aerators, more than 370 miles of pipelines, ranging up to 42 inches in diameter, more than 2600 fire hydrants, and about 31,000 service meters.

Gross receipts of Honolulu's water system in 1948 totaled $2,786,989.43.

Liverlip and Leo



"I'd be willing to bet that main runs right between us."

How Are *Your* Valves?

Monroe's simple inspection and maintenance card file system can supply an easy, accurate answer to this.

ZENNO A. GORDER, superintendent of the Monroe, Wisconsin, city water department, relates some of the department's experiences before, during and after adopting a record file for valve inspections and maintenance. Possibly the Monroe system may be adapted to meet the particular needs of other cities. Mr. Gorder was appointed city engineer for Monroe in March, 1941; director of public works in May, 1945; and superintendent of the water department in May, 1948, in addition to his public works duties.

SHORTLY AFTER taking over direct supervision of the Monroe, Wisconsin, city water department, it was learned that an unusual amount of lost or unaccounted for water was being recorded each year. After some study of the complete department, it was my thought that this could be partially accounted for because of an uncommon amount of dead meters, of leaking valves, and through unrepaired water leaks.

A large number of new meters was purchased by the board, and the dead meters replaced, and when practical, repaired. More than 20 line and service leaks were repaired in a relatively short period. Hydrants showing leakage were removed and replaced or repaired.

There remained the valve program. Shortage of men resulted in temporary deferment of this work. However, this year an additional man was authorized, making possible a 3-man "outside" crew.

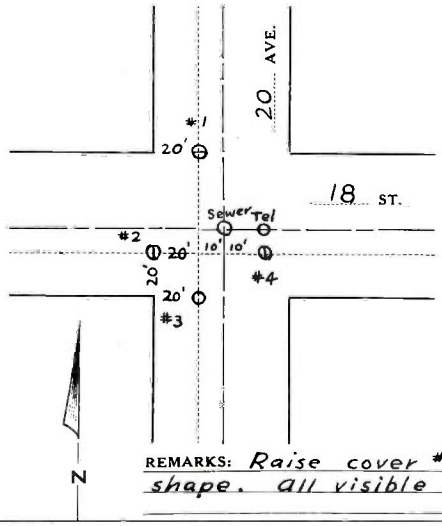
Considerable thought was given in an attempt to devise an adequate survey program which would result in the checking of *all* valves, obtaining information on their manufacture, the type, size, condition of the valves and other data, and insuring the repair of any valves found in faulty condition. In addition, all valve manholes were to be checked for safety, since a weakened brick or concrete manhole could result in an accident, should a cave-in occur.

The program was still more or less in the "thinking stage," having been delayed further due to the pressure of a heavy construction schedule, when it was brought to the fore as a result of

Monroe City Water Dept.

20 - 18
AVE. - ST.

VALVE INSPECTION & MAINTENANCE RECORD



ITEM	VALVE NUMBER			
LOCATION	1	2	3	4
MAKE	Mueller	Mueller	Mueller	Mueller
TYPE OR NUMBER	A-24805	A-24805	A-24805	A-24805
SIZE	6"	4"	6"	4"
INSPECTION	9|18|49	9|18|49	9|19|49	9|19|49
CONDITION	Good	Good	Good	Good
REPAIR	—	—	—	—
REPORT BY	EW	EW	EW	EW

REMARKS: Raise cover #3 - all manholes in good shape. all visible.

OK Sup't. Supt.

File Copy

circumstances attending what seemed at first to be a routine repair job on a heavily leaking hydrant at the intersection of Seventh and Twentieth streets—a paved intersection on our state highway connecting street system.

Prior to repairing the hydrant, the maintenance crew, headed by Elmer West, foreman, found that *a total of 14 valves* had to be closed to shut off the hydrant. If all had been in proper working condition, this could have been accomplished by closing *eight* valves, which is, of course, far too many. They had found that one valve had a broken stem, that another originally planned for the east side of the intersection never had been installed, and that three others leaked. And this was only the start.

Repair would require shutting off the water from a large hospital and 18 other blocks, and a shut-off, if not being dangerous, would at least cause great inconvenience if attempted during the day. Accordingly, two shifts of men were organized to work from 11 P.M. to 5 A.M. During that night, the following was accomplished: removal of an obsolete 6-inch valve (it has not yet been determined when and by whom manufactured), installation of a valve at the point one had originally been planned but never installed, installation of a new hydrant, and a complete rehabilitation of the old manhole.

After tearing down the obsolete valve, it was found that the gates had slipped to the bottom and that the valve had been 95 per cent closed for many years.

Installation of the replacement valve and a new valve cut down the number of valves then necessary to isolate the hydrant from 14 to four. In closing the 14 valves previously required, five were found to be in bad shape because of stem leaks.

This experience in only one small area of the city, and in a comparatively new section at that, made us wonder just what condition existed among the valves throughout the entire system.

A valve inspection and maintenance record was devised to procure adequate data for a sensible maintenance and survey program. A sample card is reproduced herewith.

The system makes possible office planning of repair programs, gives easy and readily accessible data for emergency main breaks or control of expensive leaks, and enables the setting up of a check-off system as a check on the work of the inspecting crew. In connection with the latter, it makes impossible the non-checking of trickily-located valves. The record also eliminates a lost-time charge-off, which often occurred previously during a work week or work month, by giving a fill-in type of job for the temporarily jobless crew.

The program in Monroe will result in a definite ability to compile the summary list of the numbers of each type valve installed over the years, thus resulting in possible standardization of valve purchases through the quantities now in place or for gaged efficiencies that can be studied. We are also able to have on hand the necessary minimum of repair parts for valves we plan to keep in the system.

The efficiency of our card system was demonstrated at the start. During the season just completed, a paving program of 12,500 square yards was finished in the main business district. This paving program had a new water system tied to it, which involved construction of 8-inch and 10-inch mains and the installation of a large number of new valves.

Shortly after completion and before final settlement with the contractor, the valve inspection survey was begun. The crew had been instructed to inspect both old and new work, including the construction around the square downtown. This was intended not so much as a check-up of the work there, but as a means of completely recording the data for permanent record purposes.

Two days later, the crew foreman reported that a new 10-inch valve and manhole had been paved over. The project engineer, who was still in the city, then checked and found the valve in a closed position. There was no other recourse but to insist on the removal of a slab of 8-inch concrete, 20 feet by 11 feet, installing the frame and cover and replacing with new concrete. The original manhole had been covered with boards prior to paving and forgotten. Our check-off system can be thanked for rescuing an important valve in the most important area of the city on a line that was designed for an arterial main.

Mueller Salesmen Attend School

Field representatives attend meetings at Decatur for instruction on company's new and improved products.

TWO WEEK-LONG general sales meetings and schools were held at Decatur the last two weeks of September for Mueller Co. salesmen to provide intensive instruction in the design and application of new and improved products for the gas, oil and water fields served by the company.

Approximately half of the Mueller field representatives attended the meetings at a time. Generally speaking, the groups were divided geographically, the western representatives attending the first meeting from September 19 to 23, inclusive, and the eastern salesmen attending the second from September 26 to 30.

L. W. Mueller, chairman of the board of Mueller Co., was general chairman of the meetings; J. W. Simpson, executive vice-president, was chairman of sales meetings; Frank H. Mueller, chief products engineer, was chairman of engineering meetings; and T. A. Larry, engineering consultant, was chairman of engineering discussions and demonstrations. Hugh L. Baker, general sales manager, and Robert K. Levey, assistant sales manager, led sales discussions.

As in past years, the sales meetings served as a two-way means of exchanging news on company products. Sales discussions, in addition to giving salesmen information on new and improved

T. A. Larry explains the operation of the Mueller No-Blo machine-inserted gas service valve tee. The group includes Ward L. DeWitt, George H. Hofmann, Ray Roarick, Floyd V. Johnson, W. L. Draper, George W. White, Loren Grosboll. Most sessions were of a technical nature.

Those attending the first session included, front row, left to right: Robert K. Levey, Hugh L. Baker, Frank H. Mueller, J. W. Simpson, L. W. Mueller, Albert G. Webber, Jr., Robert H. Mueller, J. L. Logsdon, O. C. Keil, George W. White. Second row: Ward L. DeWitt, T. A. Larry, Floyd V. Johnson, Loren Grosboll, George H. Hofmann, F. C. McCown, H. K. Udell, Walter A. Arnett, W. L. Draper, Paul L. Hines. Back row: Ray Fallon, John Smith, R. D. Kitchen, Francis Carroll, Francis V. Martin, Ray L. Dawkins, J. Kenneth Potts, R. P. Jett, H. V. Seevers and Dick Seevers.

Attending a session on the completely redesigned Mueller Type 56 service regulator are, left to right, J. L. Logsdon, Earl E. Tinker, Mueller Co. engineer, Ray L. Dawkins, Francis Martin and Walter A. Arnett. The new regulator incorporates a number of exclusive features.

At the second session were, front row, left to right: Robert K. Levey, Hugh L. Baker, Leroy J. Evans, Frank H. Mueller, J. W. Simpson, L. W. Mueller, Albert G. Webber, Jr., Robert H. Mueller, O. C. Keil, Fred E. Klinck, Robert Whitehead. Second row: Wilson R. Augustine, R. L. Jolly, E. W. Peterson, T. A. Larry, C. W. Auer, James E. Williamson, Francis Carroll, Richard G. Medick, Fred Kroschwitz. Back row: Otto H. Sharlock, Lloyd George, Stanley B. Johnson, Eugene P. Graeber, A. D. (Del) Parks, Harold A. Probst, George Knipe, Robert Morris, Frank T. O'Dell.

Grouped about this display of Mueller Co. products are Hugh L. Baker, general sales manager, James E. Williamson, Robert K. Levey, assistant sales manager, George Knipe, R. L. Jolly, E. P. Graeber, and J. W. Simpson, Mueller Co. executive vice-president in charge of sales.

products, also brought out performance data of products and equipment in service from the representatives in the field.

Many of the discussions and demonstrations were held before small groups, using slides and actual products installations for clearly presenting information. Several members of the Mueller Co. engineering staff served as instructors at the sessions, including John J. Smith, Earl E. Tinker and Walter Bowan.

Seven of the Mueller representatives were attending their first general sales meetings. They were Walter A. Arnett, Wilson R. Augustine, Loren Grosboll, Robert P. Jett, Richard D. Kitchen, Francis V. Martin and Robert Morris. The meeting constituted a change of pace for Mr. Grosboll, who was formerly on the company's engineering staff, for he had served as an instructor on regulators at previous sales meetings.

Since the sales force was divided into two sections, no initiation of new members into the 49 Club, an organization within the sales department, was held. The new salesmen are eligible for membership.

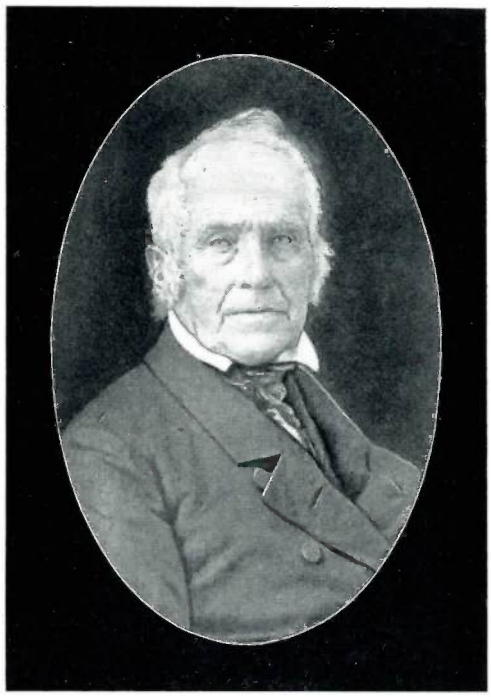
Several fines were assessed for infractions of the rules at Mueller Lodge, where the salesmen were housed, and the fines assigned to the club's treasury. On the last day of the meeting a hearing was held to determine the party responsible for the disappearance of a strident-voiced brass bell, used to waken salesmen of a morning and to summon them to sessions, but the culprit was not determined. The hearing implicated Frank O'Dell, L. J. Evans, J. Milne and Robert Morris. Since the latter is not yet a member of the club, his part in the bell's disappearance will be considered at the next initiation rites.

Salesmen who attended the first meeting were: Ward L. DeWitt, Richard D. Kitchen, George H. Hofmann, Ray L. Dawkins, George W. White, W. L. Draper, J. L. Logsdon, Paul L. Hines, Robert P. Jett, J. Kenneth Potts, Floyd V. Johnson, H. V. Seevers, Loren Grosboll, H. K. Udell, Walter A. Arnett, Francis V. Martin, Ray Fallon and Walter A. Coventry.

Those attending the second session were: Robert H. Morris, A. D. Parks, Lloyd George, E. W. Peterson, C. W. Auer, H. A. Probst, F. E Klinck, R. G. Medick, R. L. Jolly, Robert T. Whitehead, Fred Kroschwitz, Eugene P. Graeber, L. J. Evans, Frank T. O'Dell, Wilson R. Augustine, George W. Knipe, Stanley B. Johnson, Otto H. Sharlock, James E. Williamson and J. Milne.

This session on the Mueller line stopper unit No. 1 included, left to right, E. W. Peterson, C. W. Auer, L. J. Evans, H. A. Probst, R. T. Whitehead, Fred Kroschwitz, T. A. Larry, F. E. Klinck.

David Melville, Newport's Gas Industry Pioneer



David Melville, from a daguerreotype furnished by the Newport Historical Society.

AT THE BEGINNING of the nineteenth century, a number of American inventors began investigating the possibilities of improving the processes of manufacturing gas and utilizing it as an illuminant. One of these pioneers was David Melville of Newport, Rhode Island. Like many another pioneer, however, Melville's work brought him only disappointment after he had conclusively proved the merit of his methods and success seemed to be within his grasp.

Melville made one of the first practical demonstrations of gas lighting in America at Newport. He succeeded as early as 1805 in manufacturing gas for illuminating his house and supplying a gas lantern in the street before it, and although he remained active in experimenting with manufactured gas for the next fifteen years, his work had all but been forgotten by 1853, when gas was introduced to the streets and dwellings of Newport.

The apparatus for manufacturing gas was located in the basement of Melville's house in Pelham Street. Unlike other experimenters, he permitted anyone who was interested to witness the process and equipment. Melville continued to illuminate his house and street for several years while perfecting his process.

In 1810 he patented his equipment, and two years later he obtained another patent to cover improvements. Melville then considered the apparatus satisfactory "for lighting manufactories, mines, mills, streets, theatres, light-houses, and other buildings with Hydrogenous Gas or inflammable air, produced by the chemical process on Pit-Coal in a much more agreeable and less expensive manner than has hitherto been done by any other method."

Melville had become more or less involved financially in his attempts to pioneer the use of gas, and a Boston friend, Winslow Lewis, a former sea captain, came to his rescue. A partnership was formed and the concern began doing business on State Street in Boston. Advertisements were placed in newspapers and demonstrations were given.

Orders were received from the large cotton factory of Seth Bemis at Watertown, Massachusetts, the factory of the Wenscott Manufacturing Company near Providence, and for lighting other buildings. Production costs were high, and as early as November, 1813, Melville was obliged to advance the price from $10 to $12 and $13 a light. It also became necessary for him to limit his field, and he refused to set up his apparatus in any city unless several manufacturers could be on hand at the same time for a demonstration.

There were other obstacles, too, not the least of which was an accident at DeWolfes' Arkwright Factory near Providence which nearly wrecked the entire scheme. A watchman was killed when he entered the factory's gas house with a lighted candle, and the explosion destroyed the house. Melville was able to demonstrate that the accident resulted

The last gas light on the "first street in the United States to be lighted with gas." The light is on Newport's Pelham Street.

from the man's carelessness and would not have occurred if his instructions had been followed. Imperfect construction also accounted for setbacks. Gasometers were sometimes too small, and the pipes became choked with tar. And the failure of one David Grieve in his attempts to introduce gas into factories and houses served to work against Melville.

Captain Lewis's confidence in Melville began to wane after all these difficulties, and he wrote that since he had already advanced $2,000, he was indisposed to place any more money in the venture until he saw a greater prospect of success. Melville prevailed, and the captain agreed to complete any order for the gas apparatus within ten days after its receipt.

* * *

PROBABLY as a result of Lewis's influence, Melville in 1817 obtained a contract from the Treasury Department to furnish the necessary equipment and illuminate Beaver Tail lighthouse for one year.

On October 2, 1817, Melville wrote William Ellery, the collector:

"The Light-house is now fully illuminated with the Gas Lights — three gas burners were put on the 8th inst., two more on the 10th, two more on the 14th, and three more making the whole accomplishment on the 17th, since which time it has been and will continue to be lighted with the gas agreeable to contract. This whole number might have been lighted up on the 8th as conveniently as a part, but while I was waiting for Captain Calhoone to view the lighting before the alteration in the mode of lighting, I thought it most prudent to introduce the lights by degrees in order that when the keeper visited the lantern at night to trim his lamps, he might observe the difference between them and the gas lights, and make himself acquainted with the management of them as we progressed."

A little more than a year later, on October 23, 1818, he wrote in his detailed diary: "The experience with Gas has terminated agreeably to my contract with the United States.

"Considering the arduousness of the undertaking on my part, the prejudices

I have had to combat, the obstacles that have been thrown in the way,—and the entire neglect with which it has been treated by those who are most interested in having good lights in the light-houses —it has succeeded beyond my most sanguine expectations. That nothing has occurred to injure the reputation of the Gas Lights or to implicate the integrity with which the experiment has been conducted on my part, I bow with reverential awe, in thankfulness to that Omnipotent Being, who formed the universe out of chaos and who said 'Let there be light, and there was light.' "

Although the Treasury Department expressed its satisfaction with the manner in which the light had been illuminated, there was an unforeseen obstacle in his path.

Opposition developed from those who had contracted to furnish oil to the government and by those engaged in whaling, and the use of gas was declined, except, the Secretary of the Treasury wrote, in case of war, when oil could not be obtained. In that event, the Secretary said, Melville's successful experiments would not be forgotten.

Melville was bitterly disappointed, and gave up hope of ever interesting the public in the wide-spread use of gas. He abandoned the whole project, taking down the apparatus and selling the materials.

When gas came into general use in Newport, three years before Melville's death, only the mechanics who had worked on his inventions recalled his work.

Gas lights still are used in Newport, and there is one a short distance away from a small plaque which marks the site of Melville's house and commemorates the "first street in the United States to be lighted with gas."

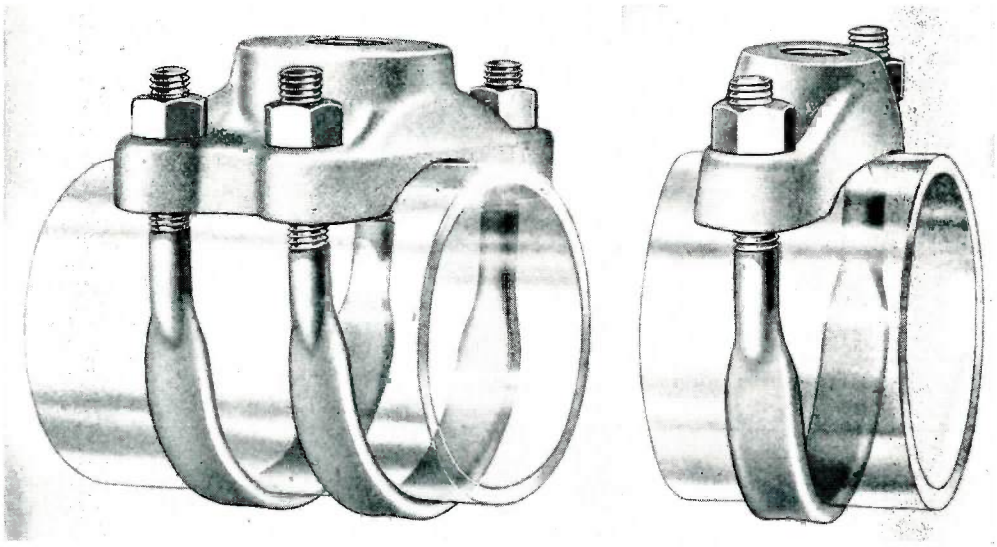
Supt. Jack Kennedy Receives Special Award

New England Association Recognizes New Champion

JACK KENNEDY, superintendent of the Winthrop, Massachusetts, water department, received a special award and certificate from fellow members of the New England Water Works Association at the organization's recent convention, held at the Balsams Hotel, Dixsville Notch, New Hampshire. Recognition as the association's high diving champion followed his performance on a diving board which had been partially dismantled by workmen who were making preparations for the hotel's close for the season at the end of the convention. Mr. Kennedy had walked down to the pool with several other guests, and the women dipped their hands in the water, exclaiming how cold it felt. Not to be outdone, he walked out on the board to obtain a better sample. The board slowly gave way, but too fast for him to regain the edge of the pool. A life preserver was presented as a fitting tribute. Due

to Mr. Kennedy's sterling performance and the lack of suitable competition, members have decided to eliminate the award for future meetings and he therefore will hold the title for life. Mr. Kennedy is treasurer of the Massachusetts Water Works Association.

Mueller Co. Introduces A New, Vastly Improved Service Clamp



Heavier, tougher products, furnished in both single and double strap patterns, incorporate many quality features.

A NEW, VASTLY IMPROVED service clamp, available in both single and double strap patterns, has recently been introduced by Mueller Co., which has been furnishing high quality clamps for more than 45 years. Development of the new service clamp has resulted from close contact with the fields served by Mueller Co. and exhaustive research to provide a clamp which would be unexcelled in quality and which would meet the most rugged specifications for all types of pipe: steel, wrought iron, lined or unlined cast iron, and asbestos-cement pipe.

The clamp bodies are made of tough, close-grained malleable iron, heavily galvanized. The inner curvature of the bodies in both patterns is accurately engineered, insuring a close fit with the particular size and type of pipe used.

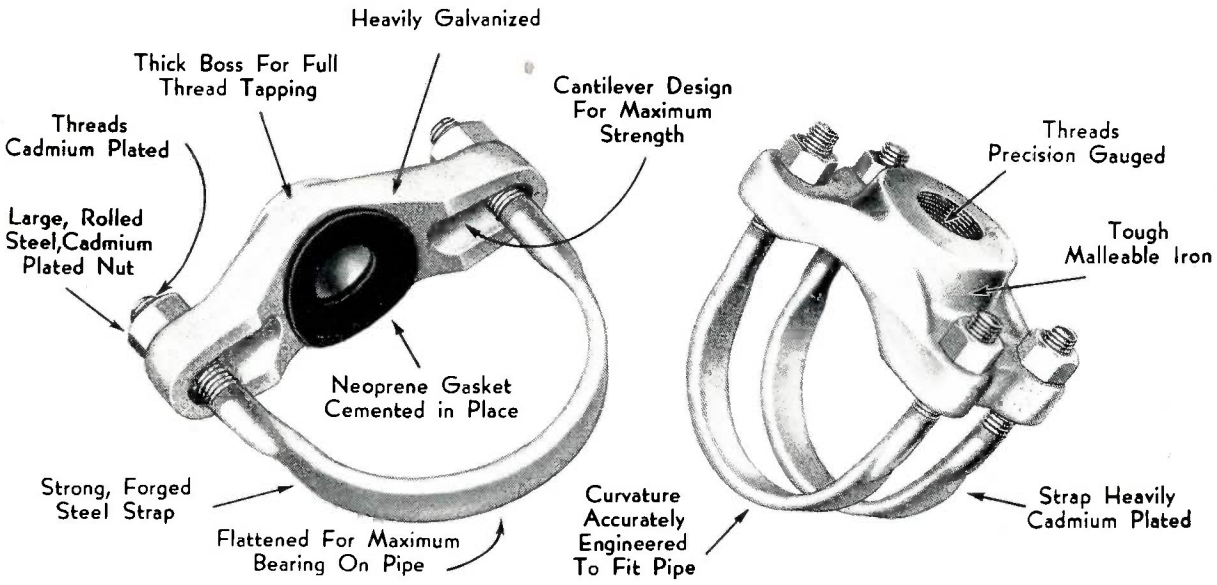
Considerable weight has been added for greater strength, and the thick boss permits a full thread length. Tappings have been improved and are precision gauged for perfect joints.

The heavier clamp straps have been flattened at the point of pipe contact for greater stability and corrosion resistance. Strap nuts and the entire strap, including the threaded sections, are heavily cadmium plated, the most effective coating for the purpose, research has shown.

A neoprene gasket, permanently cemented to the underside of the clamp body, makes possible a positive, gas or water tight seal between the clamp body and the pipe. Neoprene is highly resistant to gas, water or oil. Neither gases nor liquids can permeate or deteriorate the clamp's gasket, and the resilient properties of neoprene afford effective protection against vibration, expansion and contraction.

The new, single-strap service clamps are highly dependable under all ordinary conditions. The double strap clamp is recommended for high pressures or large services.

ENGINEERED FOR DEPENDABILITY - FOR USE ON ALL TYPES OF PIPE



QUALITY FEATURES APPLY TO BOTH SINGLE AND DOUBLE STRAP CLAMPS

Use of the clamps offers an easy method of making a wide variety of service installations, using Mueller service connections.

Single strap clamps are available to fit various types of pipe one to six inches in diameter, and the double strap pattern is offered for pipe two to 12 inches in diameter. The clamps may be ordered with all popular sizes of iron pipe or Mueller thread tappings. The clamps are regularly furnished with neoprene gaskets cemented in place, although, if desired a solidly cast one-piece lead ring gasket is available. It is fitted into a grooved space at the time of installation.

The clamps are readily attached by following these simple instructions:

- Thoroughly clean the pipe, removing all dirt and scale at the point the clamp is to be attached.
- Place the clamp body directly on the cleaned portion of the pipe in the position desired.
- Place the strap(s) around the pipe with the threaded ends protruding through the strap holes on the clamp body. Turn the nuts down evenly until the clamp body has been drawn down firmly on the pipe. Oiling the threads and top of strap holes is recommended.

If a lead ring gasket is used, these instructions apply: (1) clean pipe thoroughly; (2) fit gasket carefully into the groove of the clamp, bend ears of gasket tightly against the sides of the clamp body, and turn nuts down evenly; (4) place a block of wood on top of clamp and strike a sharp hammer blow and tighten nuts; (5) repeat this operation until clamp body is in contact with pipe.

Extra neoprene and lead ring gaskets may be ordered separately.

The many features of the new service clamp are shown in the illustration above. Quality features apply to both single and double strap patterns.

Development of the new clamp meets a definite need in service installation work for a service clamp that is permanent, rugged, corrosion-resistant, tight, trouble-free.

Mueller Co.'s long experience in the water and gas distribution fields has resulted in the engineering of a service clamp that is unsurpassed in quality.

Off the . . Record . .

After dinner, one evening, eleven-year-old Johnny popped up with the question, "Where did I come from, daddy?"

"Oh, oh," thought father, "this is it." And he took Johnny into the living room and gently introduced him to the facts of life. When the ordeal was finally over Johnny turned without comment to his model airplane, while father, brick-red and with a wilting collar, picked up the evening paper.

Five minutes later he looked up. "By the way, son, what made you ask such a question?"

"Oh, nothing specially, dad. I heard a new boy up the street say he came from Chicago and I just wondered where I came from."

* * *

A New Yorker was taking his elderly aunt from the South on a sight-seeing tour of the great city. It wasn't long until they stood gazing at the statue of General Sherman on horseback, being led by a maiden representing Victory.

"Hmph," sniffed the visitor, "just like a Yankee to let a lady walk."

* * *

Voice (to visitor at gate of nudist colony): "Whatcha want?"

Visitor: "I want to join."

Voice: "You can't join with that blue suit on."

Visitor: "That's not a blue suit — I'm cold!"

* * *

The dowager was instructing the new butler just before the big reception.

"From six to six-thirty I want you to stand at the drawing room door and call the guests' names as they enter."

"Oh, that ought to be fun, ma'am!"

* * *

"Did you say your husband was fond of those clinging gowns?"

"Yes, he likes for one to cling to me for about five years."

"Do you keep any calves?" inquired the new mother anxiously of the milkman. "Why, yes, ma'am, we do," was the reply. "Ah, good," the young mother sighed. "Then please bring me a quart of calf's milk every day. I'm afraid cow's milk is a little too strong for baby."

* * *

A weather-beaten old sailor had wandered into a water front mission where a preacher was holding forth in strong language on the Ten Commandments, detailing at length the many ways in which they could be broken. The sailor departed in a very subdued mood, but after walking a few blocks and thinking matters over, his face brightened and he squared his shoulders. "Anyhow," he muttered, "I never made no graven images."

* * *

Policeman: "How did you knock him down?"

Motorist: "I didn't. I pulled up to let him go across—and he fainted."

* * *

Real estate agent: "Well, what do you think of our little city?"

Prospect: "I'll tell you, brother. This is the first cemetery I ever saw with lights."

* * *

"I don't think that man upstairs likes to hear Georgie play his drum, but he's certainly tactful about it."

"Why?"

"This afternoon, he gave Georgie a knife and asked him if he knew what was inside the drum."

* * *

"What is your name?"

"Quitz Smith."

"How did you ever get such a queer name?"

"Well, I'll tell you. When I was born in Brooklyn, my father walks into the room, looks at me and says to mom, 'Let's call it Quitz.' "

* * *

Housewife: "Just look at the dust on the piano! It's at least six weeks old."

Maid: "Then it don't have nothing to do with me, ma'am. I've only been here four weeks."

* * *

He walked into a bar optimistically and left misty optically.

"I hear he married her because her uncle left her a million dollars."

"That's a lie! He'd have married her no matter who left it to her."

* * *

First salesman: "Had a great day, made a lot of friends for the company."

Second salesman: "Yeah, I know what you mean. I didn't sell anything either."

* * *

"I'm sorry, dear, but dinner is a little burned."

"Whatsa matter, the delicatessen catch on fire today?"

* * *

There was a crash, and a ball came sailing through the kitchen window and landed at the housewife's feet. She quickly rushed to the door, only to find the street deserted.

About half an hour later a timid knock came on the door, and the scared voice of a small boy said: "Please, ma'am, here comes father to mend your window."

Looking up the road, she saw a man with a piece of glass approaching the house, so without further ado, she returned the ball to the boy and praised him for being so honest.

It did not take the man long to repair the window. Then he turned to the housewife.

"That'll be $3.50," he said.

"What!" she exclaimed. "Wasn't that boy your son?"

"Bless you, ma'am," said the glazier, "ain't you his mother?"

Spiritualist: Ah, I hear the spirit of your late wife knocking.

Husband: Who's she knocking now?

* * *

A drunk staggered into a night club and in a loud voice yelled:

"When I drink, everybody drinks!"

He summoned everyone to the bar, patrons, hatcheck girls, musicians, waiters. Everyone had a drink. When he finished he yelled again:

"When I take another drink, everybody takes another drink!"

Once more everyone in the club gathered around the bar. Taxi drivers, doormen and a cop were called in from the corner. When the drunk finished his second drink, he took a dollar bill out of his pocket and tossed it on the bar.

"When I pay," he yelled, "everybody pays!"

* * *

A teacher wrote on the blackboard: "I didn't have no fun last night." Turning to the class she said, "How can I correct this?"

A voice from the rear of the room answered: "Get yourself a boy friend."

* * *

"Jack is awfully smart. He's got brains enough for two."

"Congratulations, dear! He's just the man for you."

* * *

"Who has done the most to rouse the working classes?"

"The inventor of the alarm clock."

Mostly Personal

(Continued from page 1)

factor attributable to the war was a sharp population rise of approximately 50 per cent in the four-year period beginning in 1940. Today's civilian population is estimated to be greater than at any time during the war, even though the transient and resident military population is smaller and the city's population has now resumed a more normal annual rate of increase.

* * *

We are happy to report that for the second consecutive year the winning team in the annual main-tapping contest, held in conjunction with the outing and dinner of the Westchester Water Works Conference, used Mueller products. The trophy this year was won by

Nicholas Casolaro and Joseph Gulick of the Town of Greenburgh Water and Sewer Department, who made the tap and inserted the corporation stop in the main under pressure in six minutes and eight seconds, compared with seven minutes and 37 seconds taken by the runner-up team, representing Westchester Joint Water Works No. 1, Mamaroneck.

Last year, you may recall, the Peekskill team won the contest in eight minutes, 22 seconds. Greenburgh had the better time last year, but was disqualified because of a leaking corporation stop (which, it must be pointed out, was furnished by another manufacturer). Westchester Joint Water Works No. 1 was also the runner-up last year.

Leroy J. Evans and James E. Williamson of the New York office of Mueller Co. presented Mueller shower heads to the members of the winning team.

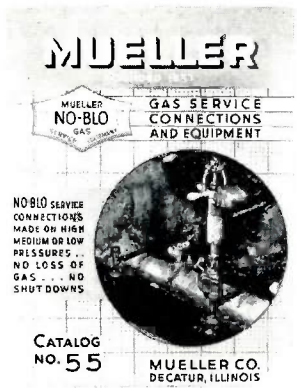
William Jiannott, superintendent, Water District, Thornwood, was elected chairman of the conference for 1950, succeeding Albert E. Kassay, superintendent, North Tarrytown. Other officers elected were secretary-treasurer, R. M. McLaughlin, department of health, White Plains; and directors for three years, Joseph J. DiCuirci, water department, Ossining; Vincent Mascia, Westchester Joint Water Works No. 1; and Mr. Kassay.

* * *

It should be reported here that the sales meetings last month were highly decorous. Since only half the Mueller sales force was in Decatur at a time, no meetings of the 49 Club were held. Ordinarily the initiation of new members into this organization within the sales department is one of the extra-curricular highlights of general sales meetings.

* * *

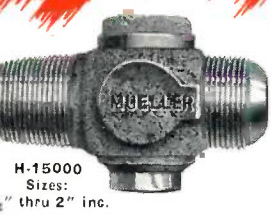
Distribution is underway of the new Mueller Catalog No. 55, which presents to the gas industry a complete line of Mueller No-Blo gas service connections and equipment. The catalog includes Mueller No-Blo gas service tees, service valve tees, service line stopper fittings and equipment for their use, service clamps, gas main stops, curb stops, curb boxes, meter stops, meter bars and gas regulators. The catalog features many new and improved products for the gas industry.



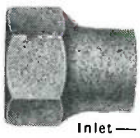
The products offered have been developed by Mueller Co. to cover all conditions that may be encountered in the field. To perfect the products required exhaustive research with special alloys and numerous designs to assure safety, ease and economy of operation, and permanence.

MUELLER CORPORATION STOPS

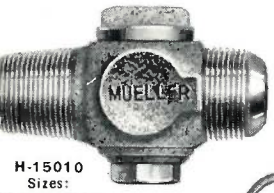
FOR INSERTING WITH MUELLER TAPPING MACHINES



H-15000
Sizes:
" thru 2" inc.

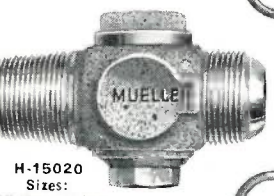


Inlet—MUELLER Thread
Outlet — For Copper
Service Pipe with
Straight Coupling Nut.
(Gasket Not Required.)

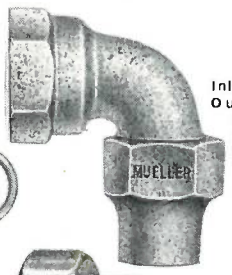


H-15010
Sizes:
" thru 2" inc.

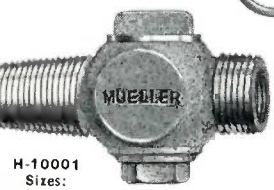
Inlet—MUELLER Thread
Outlet — For Copper
Service Pipe with 1/8
Bend Coupling and
Gasket.



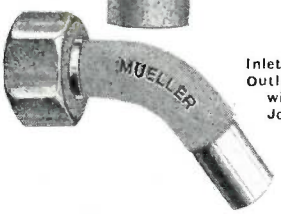
H-15020
Sizes:
" thru 2" inc.



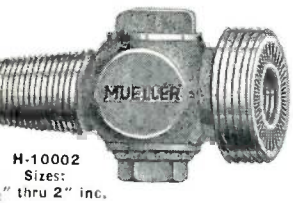
Inlet—MUELLER Thread
Outlet — For Copper
Service Pipe with 1/4
Bend Coupling and
Gasket.



H-10001
Sizes:
" thru 2" inc.

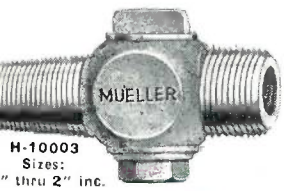


Inlet—MUELLER Thread
Outlet — Mueller Thread
with 1/8 Bend Wiped
Joint Coupling.



H-10002
Sizes:
" thru 2" inc.

Inlet—MUELLER Thread
Outlet — Lead Flange
Coupling.



H-10003
Sizes:
" thru 2" inc.

Inlet—MUELLER Thread
Outlet—Iron Pipe Thread
One Size Larger Than
Body. Without Coupling.

MUELLER Corporation Stops have many features of design and construction which result in TROUBLE-FREE installation and service.

- Every part cast from high copper content bronze for maximum resistance to corrosion.
- Ruggedly designed to prevent distortion during manufacture, handling, installation and service. Results in a water-tight stop.
- Precision made ground key construction with each key and body ground and lapped together.
- MUELLER inlet threads are accurately machined to meet exacting specifications, assuring a water-tight joint at the main.
- Outlet connections are individually designed for the type of service to be used, resulting in the least number of joints.

For a dependable connection to the main, easily made without interruption of service, use MUELLER Corporation Stops* installed with a MUELLER Tapping Machine equipped with a MUELLER Combined Drill and Tap.*

Consistently Produced With Accurately Matched Threads.

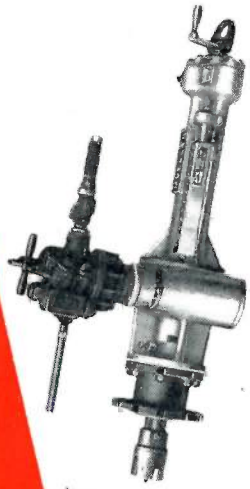
DEPENDABLE SINCE 1857 FULLY WARRANTED OUR 92nd YEAR

MUELLER CO.

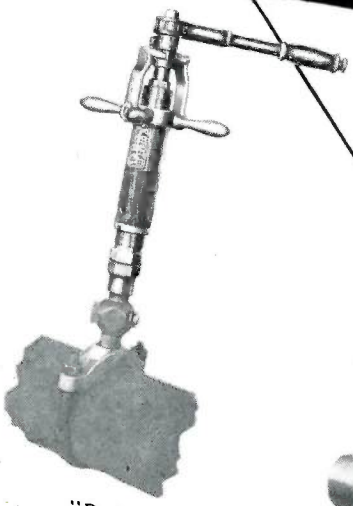
MAIN OFFICE AND FACTORY.....DECATUR, ILLINOIS
OTHER FACTORIES: *Los Angeles, Cal.; Chattanooga, Tenn.; Sarnia, Ont. Canada*

MUELLER EQUIPMENT AND FITTINGS

FOR TRANSMISSION AND DISTRIBUTION LINES UNDER HIGH, MEDIUM OR LOW PRESSURE.



"C-1" Drilling Machine



"D-4" Drilling Machine

"E-4" Drilling Machine

Repairs, extensions or additions to transmission and distribution lines are made economically and safely by using Mueller Drilling Machines that drill through stops, valves or fittings without shutting down the line or reducing pressure.

The "E-4" Drilling Machine has a drill capacity from 7/16" to 1" inclusive, the "D-4" Drilling Machine has a drill capacity from ¾" to 2" inclusive and the "C-1" Drilling Machine will drill through gate valves in sizes 2" to 12" inclusive. The "C-1" Machine is extremely efficient as it is operated by a compressed air motor that cuts many times faster than hand operated machines.

SAVE-A-VALVE DRILLING NIPPLES

H-17490

H-17495

Mueller SAVE-A-VALVE Drilling Nipples are ideal for temporary or semi-permanent pressure connections as they have an inside thread which permits the insertion of a plug in the nipple with the "E-4" or "D-4" Drilling Machine. The valve can be removed when the connection is abandoned while the line is under pressure. At any future time, the connection may be used again by simply reversing the procedure. Mueller SAVE-A-VALVE Drilling Nipples are tested for pressures up to 500 lbs. p.s.i. and are available in sizes from 1" to 4" inclusive.

DEPENDABLE SINCE 1857 — FULLY WARRANTED OUR 92nd YEAR

MUELLER CO.

MAIN OFFICE AND FACTORY.....DECATUR, ILLINOIS

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