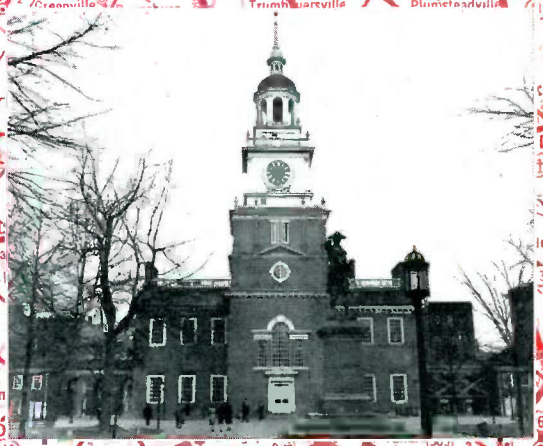
MUELLER Record

JUNE • 1962



While in Philadelphia for AWWA Conference (pg. 3), Visit The Nation's Oldest Water System at Nearby Schaefferstown (pg. 12).

MUELLER RECORD

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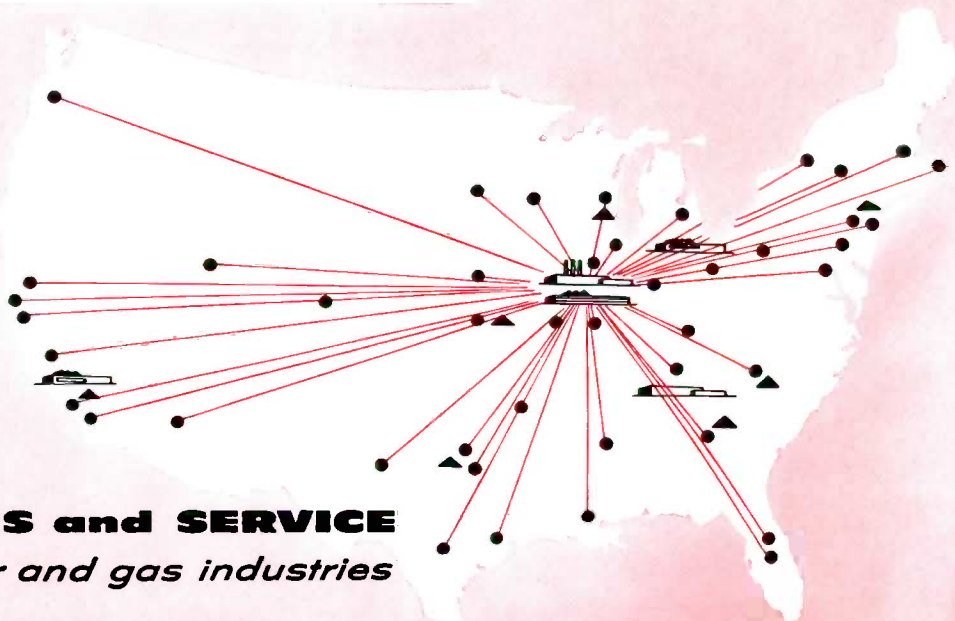


Since 1857
Quality Products for the Waterworks and Gas Industries

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

4,000 To AWWA Conference

Flood of Waterworks Men Heads For Philadelphia

Nearly 4,000 water utility managers, engineers, manufacturers and others interested in public water supply are expected to converge on Philadelphia June 17. The occasion: the eighty-second annual conference of the American Water Works Association.

When the conference opens Monday morning, June 18, an impressive array of almost 100 experts in the water field will be available for conferees. A busy six-day schedule of activities will include 14 technical sessions covering the basic problems facing the industry in the fields of resources, treatment, distribution and management, as well as numerous committee meetings on special problem areas.

Highlights of the meeting will be an address by Secretary of the Interior Stewart L. Udall, and a panel led by Abel Wolman and entitled "What Is Good Water Service, And How Should It Be Paid For?" The Udall speech is set for Session number 8, Wednesday morning, June 20.

Other important speakers will discuss: production of quality water from a polluted source; the effectiveness of water treatment in virus removal; water quality criteria and rating; quality control; quality monitoring of streams; and handling of disaster problems. This latter subject, which is gaining a great deal of industry interest and attention, will be discussed Wednesday morning by President-elect William D. Hurst.

Early arrivers in the "City of Brotherly Love" will have an opportunity, at 1 p.m. Sunday, June 17, to view the very latest products of more than 100 manufacturers in the water works equipment field.

Of course, the social side of this annual event has not been slighted. Plenty of activities have been planned for the ladies.

The social whirl actually begins at 8:30 Sunday night, when everybody gets together at the Bellevue-Stratford Hotel for the Meet and Greet Party.

Also planned are tours, golf tournaments, informal get-togethers, award ceremonies, and what is billed as a "wonderful innovation" —the annual banquet and ball, to be held in the world-famous Latin Casino.

It promises to be another profitable week for the water works industry and personnel, with the host group out to break all previous attendance records.

MEET YOUR NEW OFFICERS

New officers will be installed at the 82nd Annual American Water Works Association Conference in Philadelphia this month.

William D. Hurst, city engineer of Winnipeg, Man., has been nominated to succeed John W. Cramer as president of the organization. Mr. Cramer is a senior partner in the consulting engineering firm of Fulton & Cramer of Lincoln, Neb.

WILLIAM D. HURST
President

Taking office as vice-president will be John G. Copley, general manager of the Elmira, N. Y. Water. He succeeds Mr. Hurst in this position.

Beginning his sixth term as treasurer will be William J. Orchard of Maplewood, N. J., retired general manager of Wallace & Tiernan, Inc., Belleville, N. J.

Born in Winnipeg in 1908, Mr. Hurst was graduated from the University of Manitoba in 1930 and did graduate work in the United States at Virginia Polytechnic Institute. He became a resident and office engineer of the Winnipeg Water Works in 1931, engineer of water works in 1934, and deputy city engineer in 1944. He has been city engineer and commissioner of buildings in Winnipeg since 1944. He has been an AWWA member since 1934 and from 1952 to 1955 he represented the Canadian Section on the Association's Board of Directors. In 1946 Mr. Hurst was awarded the AWWA's George Warren Fuller Award for outstanding service in the field of public water supply.

Mr. Copley, 55, a native of Lowman, N. Y., is a civil engineering graduate of Princeton University and a registered professional engineer in New York and Pennsylvania. From 1929 to 1932 he worked with the Pennsylvania Railroad in Philadelphia. In 1932 he joined the Elmira Water Board, becoming secretary in 1937 and general manager in 1942. Mr. Copley is a 1947

JOHN G. COPLEY
Vice-President

recipient of the George Warren Fuller Award. In 1961 he traveled for the International Cooperation Administration, conducting water system management seminars for water supply professionals in the Near and Far East.

Mr. Orchard has been a member of the AWWA since 1917 and his activities include membership in many of the group's committees. He has had four, three-year terms as a director, chairmanship of the Association's finance committee since 1951, and membership in the executive committee since 1945. Mr. Orchard was made an honorary member of the AWWA in 1937 and, in 1954 he was awarded the John M. Diven Medal, which is given each year to the member who has given the most outstanding service to the AWWA.

WILLIAM J. ORCHARD
Treasurer

TECHNICAL PROGRAM

SESSION 1—Monday A.M., June 18

GENERAL SESSION

Address of Welcome . . . . . Donald C. Wagner
Address . . . . . John W. Cramer
Report on A & O Study . . . . . Samuel S. Baxter
Efficient Use of Our Water Resources . . . . . Sheppard T. Powell

SESSION 2—Monday P.M., June 18

PURIFICATION DIVISION—IMPROVED WATER SERVICE

Producing Quality Water From a Polluted Source . . . . H. E. Hudson, Jr.
Effectiveness of Water Treatment Processes in Virus Removal . . . . . Gordon G. Robeck
Discussion . . . . . H. O. Hartung
Effectiveness of Water Utility Quality Control Practices . . . Floyd Taylor
Quality Criteria and Rating . . . . . Elwood L. Bean

SESSION 3—Monday P.M., June 18

RESOURCES DIVISION—QUALITY

Continuous Stream Monitoring on Ohio River . . . . . Edward J. Cleary
Recording Water Quality in the Delaware Estuary . . Norman H. Beamer
Thermal Pollution of Surface Supplies . . . . . Gerald E. Arnold
Detection and Quantitative Estimation of Synthetic Organic Pesticides by Chromatography . . . . . Rolf Skrinde

SESSION 4—Tuesday A.M., June 19

OPEN SESSION

Committee on Professional and Administrative Practice . . . . . Wendell R. LaDue
Progress Reports of various Working Committees will be presented.

SESSION 5—Tuesday A.M., June 19

PURIFICATION DIVISION—DIATOMITE FILTRATION

Theory of Filtration Applicable to Diatomite Filters . . . . . E. R. Baumann, R. L. LaFrenz
Design Criteria for Diatomite Filters . . . . . G. R. Bell
Iron & Manganese Removal With Diatomite Filters . . . . . Worthen H. Taylor, George Coogan
Experiences With Municipal Diatomite Filters in Michigan . . . . . T. L. Vander Velde, C. C. Crumley
In New York . . . . . G. W. Moore

SESSION 6—Tuesday P.M., June 19

OPEN SESSION

Committee on Standardization . . . . . Louis R. Howson
The activities of the various Working Committees will be discussed.

SESSION 7—Tuesday P.M., June 19

RESOURCES DIVISION

Use of the Analog Model in Ground Water Studies . . . . . R. H. Brown
Utilization of Our Ground Water Resources . . . . . R. O. Joslyn
Siltation Problems of Reservoirs . . . . . D. A. Williams
Reduction of Evaporation from Reservoirs . . . . . Curtis Michel

Philadelphia's Independence Hall

SESSION 8—Wednesday A.M., June 20

GENERAL SESSION

Delaware River Compact.....Stewart L. Udall, Secretary of Interior
Water Supply and Disaster Problems—
Introductory Statement.....William D. Hurst
Principal Statement.....F. H. Whitley
Centralized Load and Quality Control of the Philadelphia
Distribution System.....Samuel S. Baxter, Victor A. Appleyard

SESSION 9—Wednesday P.M., June 20

PURIFICATION DIVISION—OPERATION

Operating Experiences at Philadelphia
Suburban Treatment Plants.....K. E. Shull
Election of Officers and Business
Committee Reports a. Saline Water.....Rolf Eliassen
Thermoeconomics of Saline Conversion.....Myron Tribus

JOINT SESSION 10—Wednesday P.M., June 20

MANAGEMENT AND DISTRIBUTION DIVISIONS—
IMPROVING SERVICE

What Is Good Water Service and How Should
It Be Paid For.....Panel—Abel Wolman, Moderator;
H. J. Graeser, T. W. Moses, J. W. McFarland, E. L. Filby
The Years Ahead—Resources, Plant and Planning.....Richard Hazen

SESSION 11—Thursday A.M., June 21

OPEN SESSION

Water Utility Advancement Committee.....Robert S. Millar
Reports by Section Chairmen General Discussion of Program
Report by Eric F. Johnson

SESSION 12—Thursday A.M., June 21

A Comparison and Evaluation of the Design Criteria
for Pipe of Various Materials.....Panel—Edwin B. Cobb,
H. Arthur Price, Ernest W. Whitlock, Roy H. Ritter

SESSION 13—Thursday P.M., June 21

MANAGEMENT DIVISION

Water & Sewage Bond Sales in U. S.—
Trends and Figures.....Richard S. Green and Donald Beer
The Economic Analysis of Water Supply Projects.....J. L. Rose
The Metropolitan Approach to Utility Service.....Henry D. Harral
Treatment Plant Safety.....James C. Vaughn
Education Program.....H. E. Hudson, Jr.

SESSION 14—Thursday P.M., June 21

DISTRIBUTION DIVISION—IMPROVING WATER SERVICE

Steel Water Storage Tanks.....William R. Seeger
Waterline Crossings—Progress Report.....Leo Louis
Research Committee Activities/Projects.....Panel—T. E. Larson,
Harry Faber, Ernest Gloyna, Richard Engelbrecht,
Robert McCauley, A. P. Black, J. K. G. Silvey

19th Century Atmosphere Held By Hiding Hydrants

Full Fire Protection System Kept Out Of Sight Of Tourists At Restored Village In New England

A village in New England, famous for its carefully restored old buildings and priceless antiques, hides its fire hydrants where they can't be seen. This may seem like sheer madness to the average safety conscious citizen or fireman but it is done with the blessings of fire underwriters.

The place is Old Sturbridge Village, at Sturbridge, Mass., which brings to life the way people lived, worked, traded and worshipped during the first 50 years of American independence.

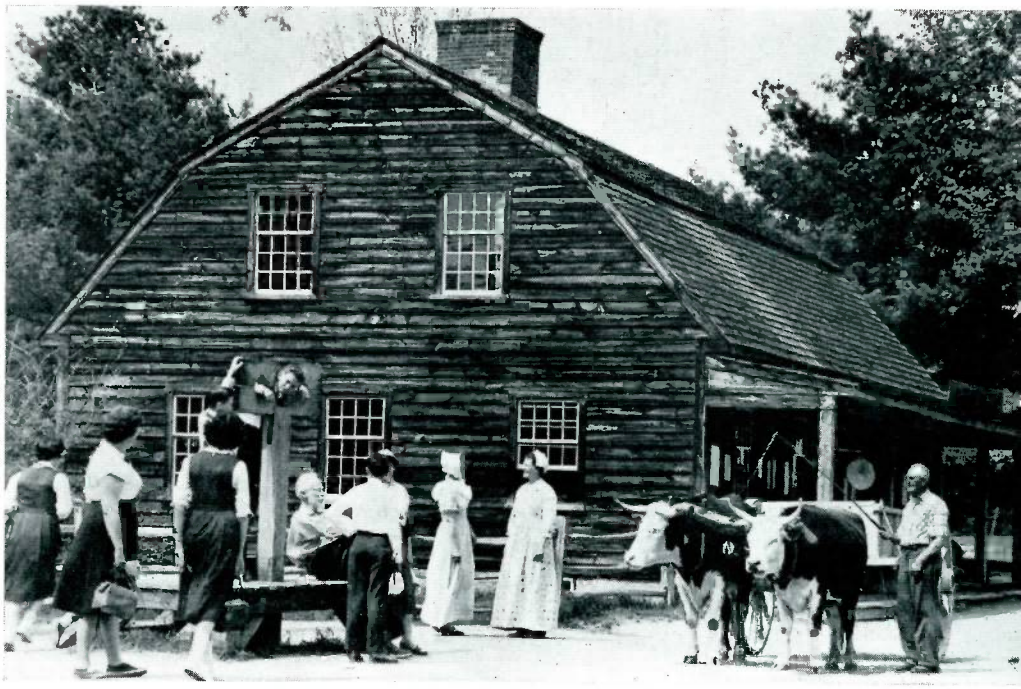
The village is made up of old homes, shops, meeting-house, general store, school house, grist mill and farm, and authentic buildings collected from various sections of New England and assembled on a 200-acre tract. This re-recreation of a typical New England country town of the early 1800's is about 150 miles northeast of New York and 60 miles west of Boston.

In spite of its attempt to retain its 19th century appearance the village must depend on such 20th century devices as two miles of six-inch water mains and six fire hydrants to protect the old buildings, their antique furnishings and the heritage they represent.

The hydrants are ingeniously concealed in clumps of bushes and under barrels away from the eyes of visitors but easily accessible to the Sturbridge Fire Department, whose personnel is well-acquainted with their locations.

More than 300,000 visitors, including 35,000 school children in organized groups, tour the nonprofit educational institution annually.

A dozen early crafts are practiced and demonstrated daily at the village. Included in these exhibitions is the method for making wood water mains.



Although Old Sturbridge Village in New England attempts to take visitors back to the early 1800's, a modern water system must be maintained to insure healthful surroundings and fire protection. To maintain the 19th century atmosphere, the fire hydrants are hidden under barrels and behind bushes.

The mains are bored by hand by a 15-foot auger with the ends tapered and reamed to shape male and female fittings. When they are slipped together the water swells the joints making a water-tight fitting. The tools used in the demonstration are antiques made by Yankee woodturners and blacksmiths when our nation was new.

From time to time wood water mains are found across the country and many are still in good shape after being in service from 75 to 100 years. Mueller Co. still manufactures two types of corporation stops that have wood main threads on the inlet side. These stops range in size from 5/8-inch to two inches.

Old Sturbridge Village is not a restoration of an actual historical place, but the re-creation of an imaginary representative New England community of the period 1790 to 1840.

Entering the village, visitors leave the modern world behind and travel by foot over gravel roads

where horse-drawn vehicles and ox carts are the only means of transportation.

The center of Old Sturbridge is the village green or common, where at one end the white spire of the chaste and austere meetinghouse rises against the blue sky and at the other end stands the exquisite General Salem Towne mansion built in Charlton, Mass., in 1794 and equipped with the finest examples of early New England furniture and furnishings.

In contrast to these elegant buildings is Miner Grant's little unpainted general store, where old fashioned penny candies and homebaked cookies are available, and the solid granite Moses Wilder blacksmith shop, moved to the village from Bolton, Mass., and still worked by blacksmiths at its two-man forge.

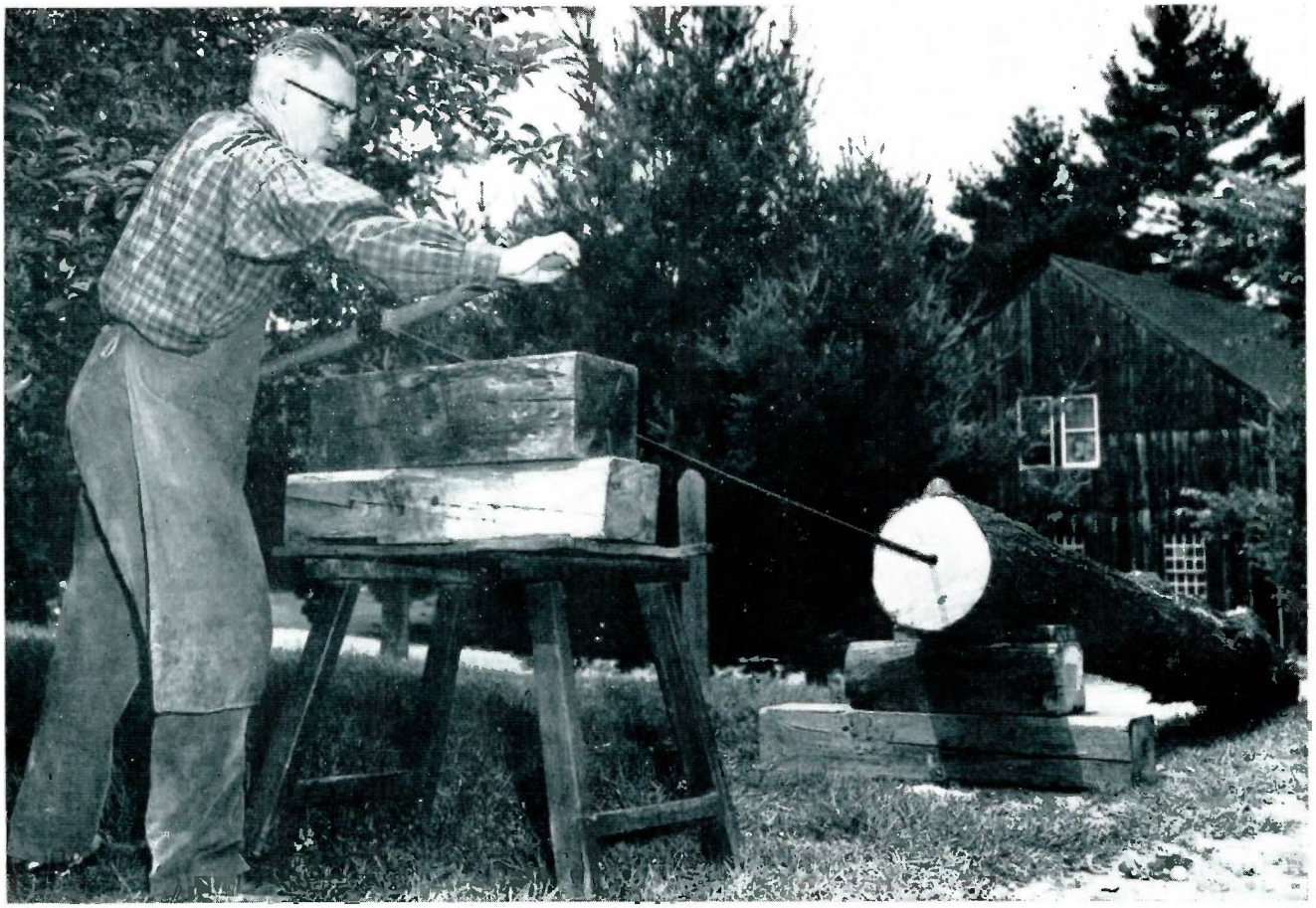
All buildings at the village are occupied by hosts, hostesses or demonstrating craftsmen wearing floor length empire gowns and homespun shirts of long ago. A dozen jobs and routine chores of yesteryear are practiced daily. These include bread and bean making in a brick oven, early printing, broom and pottery making, spinning and weaving and the hewning of wood water mains.

Old Sturbridge Village's story begins in the 1920's with two brothers, Albert and J. Cheney Wells, members of a family prominent and active in the New England vicinity for several years. As has happened to many individuals, the Wells brothers were smitten with the collecting urge. Family stories linger from the 1920's and 30's recounting the adventures and fun the brothers had as they collected the objects found in the barns, homes, sheds and shops of early America.

As the collection grew in size and scope, so spread its fame. It became apparent to the brothers that their private treasures were of great public interest and importance. From this realization came decisions to establish a museum of some kind. It was but a step to the idea of exhiting the collections, not in glass cases of a typical city museum but in a natural setting that would suggest the original locations of the objects and their uses.

Thus emerged this concept of a re-created village formed by bringing together 30 buildings in a typical layout.

In the early years of this endeavor, the Commonwealth of Massachusetts granted a charter establishing Old Sturbridge Village as an independent non-profit educational institution. To this organization and to its board of trustees, the two founding brothers gave



A dozen early crafts are practiced and demonstrated daily at Old Sturbridge Village. The area of greatest interest for waterworks men is the making of wooden water mains. In the above photo, an early craftsman takes the first step in making a main by boring a hole through a log with a 15-foot long auger.

After a log is bored, one end of the section is tapered with a tool made from a hardwood block and a hand forged blade.

One end is reamed with an antique hand tool (right) made by Yankee woodturners and blacksmiths when our nation was new. After this operation the sections are slipped together (below) to make the joint. Once the water starts running, the moisture swells the wood and makes it watertight.

The Mattatuck Drum Band steps smartly around the village green at Old Sturbridge each annual Muster Day. Muster Day is a colorful revival of an old-time Yankee militia muster and features parades of ancient and honorable military units throughout the day.

their collections, the buildings and site.

The village is now managed by a professional museum staff appointed by the trustees. Financial support of its operations comes entirely from admission fees, sales, royalties, endowment income and gifts. All revenues are used for the support of the village and its educational program with no part accruing to any private benefit.

More than a million and a half visitors have stepped into the past since Old Sturbridge Village opened in 1946.

As the visitor goes leisurely through the village, completely immersed in the past, he is unaware that behind a bush or underfoot is a modern fire protection system that protects this center of living history.

The solid granite blacksmith shop dates back to 1810. Inside, the blacksmiths work the two-man forge, turning out latches, hinges, foot scrapers, candlestands, and a myriad of other hand wrought objects.

An antique loom is used to show some young visitors how the housewife of yesteryear manufactured her own textiles for the family clothing and other household linens. Wool from the family's sheep and flax from the family garden provided the materials to produce linsey-woolsey, a popular fabric 150 years ago.

. . . . Around the Water Industry . . . .

New Jersey Supt. Saves 2 From Sea

The water superintendent of Avon, New Jersey, recently pulled two men from the icy, turbulent waters of the Atlantic in a daring recovery attempt.

Jack McWeeney, 37, pulled one man to safety in time to save his life but another man failed to respond to treatment and was pronounced dead at a Neptune, New Jersey hospital. A third man skin diving, was able to get to shore and did not require treatment.

Supt. McWeeney said he was talking to a friend near the beachfront when a passerby yelled that three skin divers were in trouble. "I jumped over a fence and raced for the shore, hollering to the men to see if they were all right," he said.

He continued, "I took off my jacket, shirt and shoes and dove into the water. When I got out to the first two men, one of them grabbed me, but I pushed him away to get the man farther out."

"He put up a fight at first but fell unconcious. I got a grip on him and paddled into shore. Then I pulled in one of the men who was closer to shore. The third guy made it by himself," Mr. McWeeney added.

Mr. McWeeney, a champion swimmer as a youth, said he hadn't been swimming in 12 years. He said, "It was a nightmare. Certainly I would do it again, but I would hate every moment of it."

According to newspaper reports, the three men were practicing skin diving when the mask of one started to leak. As the other two attempted to help the third person, an undercurrent pulled one diver 200 feet from shore.

John Cook Marks 50th Year In Ohio

John J. Cook, a water distribution supervisor for the Columbus, Ohio water department, recently marked his 50th year of service with the department. More than 100 fellow city employees and friends gathered to honor Mr. Cook during a testimonial. He received a gift from co-workers who also proclaimed a John J. Cook Day.

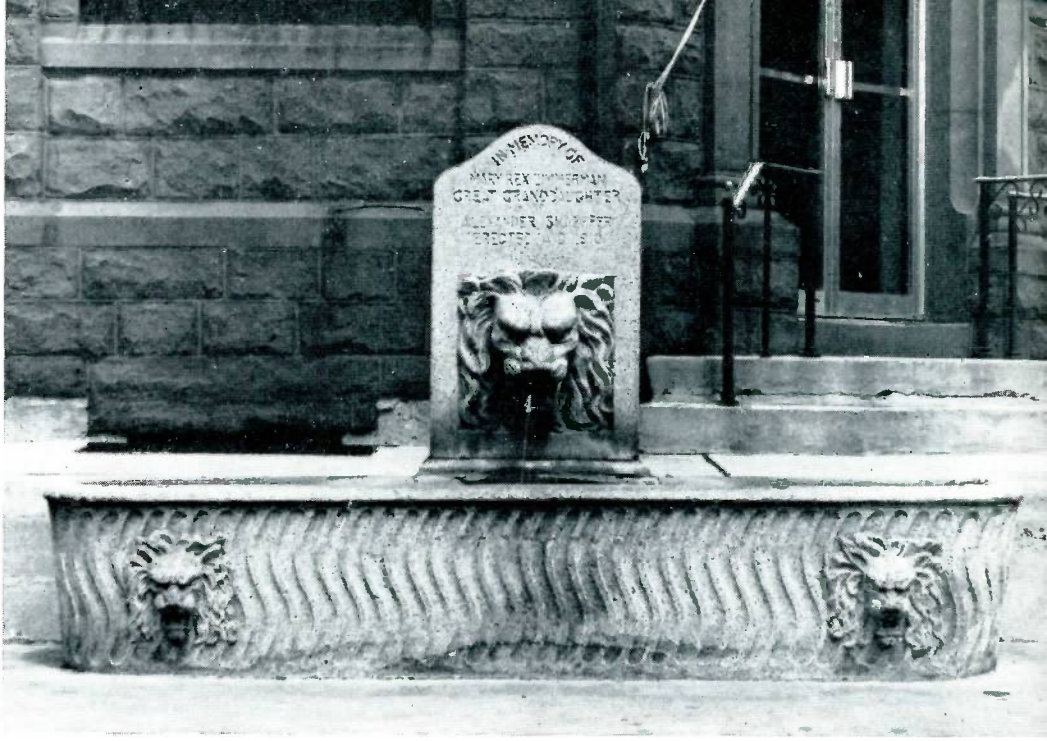
Engineer's Book Salutes Industry

H. Kenneth Anderson, Chief Engineer for the Bureau of Water Works of Portland, Ore., is now a published writer. Carlton Press of New York has just published a book **Not A Drop To Drink,** which was compiled and edited by Mr. Anderson. He has gathered together under one cover many articles, factual reports, stories, anecdotes, humorous incidents and jokes which pertain to the field of water and water utilities. In his introduction John W. Cramer, President of the American Water Works Association says: "Utilities men are traditionally the hardest working and least appreciated public servants in our country today. Water utilities men perhaps find themselves even less appreciated than the operators of any other type of utility because people generally tend so much to take good water service for granted. Yet water utilities people find great compensations in their jobs. While the job is tedious and involves long hours, many amusing incidents do occur to lighten the load and provide diversion. Ken Anderson in his collection, **Not A Drop To Drink,** has caught much, not only of the dedicated spirit of service of water works men, but of their humor and the kinds of situations they face. "In 1959 Mr. Anderson authored a story about Portland for the MUELLER RECORD.

New Device "Hears" Underground Leaks

The unique sound of water leaking from underground pipes has been isolated after intensive research by a Penn State University professor. In the project, recordings were made of all types of underground noises in various parts of the country. An electronic device was then developed that filters out ground noises and hears only the sound made by water escaping from a buried pipe.

This concrete watering trough stands on the Schaefferstown city square, where its free water is available for passers-by just as it was 199 years ago. A closeup of the stone marker (below) reads: "In memory of Mary Rex Zimmerman, great granddaughter of Alexander Schaeffer. Erected A. D. 1910."

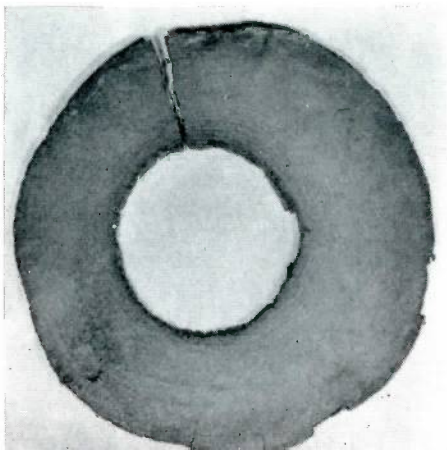


Schaefferstown, Pa.

Free Water Offered For Past 199 Years

America's Oldest Public Water System

This is one of the sites upon which Alexander Schaeffer built a water service for residents of Market Street in 1763. He built a ¾-mile long wood pipeline from a spring to the town where residents could get free water. The water is still flowing through what is believed to be the oldest public water system in America. A sample of the wood pipe is shown at the left.



Visitors to the AWWA conference in Philadelphia will be only a few miles from what is believed by some, to be the oldest public water system in the country.

The system, located in Schaefferstown which is about 75 miles from Philadelphia, is still serving free water to the same two customers it did when it opened in 1763. Shaefferstown, Lebanon County, has a poulation of about 1,000 persons and it is presumed it was named after Alexander Schaeffer, the town's first water superintendent.

According to legend and local historians, Mr. Schaeffer settled in the area in the 1750's in a village called Heidelburgh, later renamed Schaefferstown. About 1758 Mr. Schaeffer took title to ground which contained a free-flowing water supply known as Leating Spring. This spring ultimately became the source of water supply for the first Schaefferstown Water Co.

Apparently a public-minded citizen, Mr. Schaeffer organized the town water company to supply water to the residents of the village who lived on Market Street and for travelers and wagon teams passing through the town square.

A wooden pipeline, about ¾ of a mile long, was constructed from the spring to two sites in the village. Mr. Schaeffer then built two 10-foot long watering troughs and invited the citizens and travelers to help themselves.

Townspeople came to the watering stations with buckets and jugs to collect this free necessity. Today, these two wood troughs and wood pipe have been replaced by iron, stone and concrete, but this free water is still available at the same locations.

On the spring house was found a plaque which read: "Alexander Schaeffer and wife to the residents of Market Street, July 16, 1763." This marker has established one date regarding the system but there is some speculation that it could have been in use prior to this.

During the reconstruction of the well house in 1910, another plaque was found which read: "Alexander Schaeffer to the Town of Heidelburgh, July 13, 1763. Chartered April 16, 1845." According to information from the town, this is the oldest chartered water company in the United States.

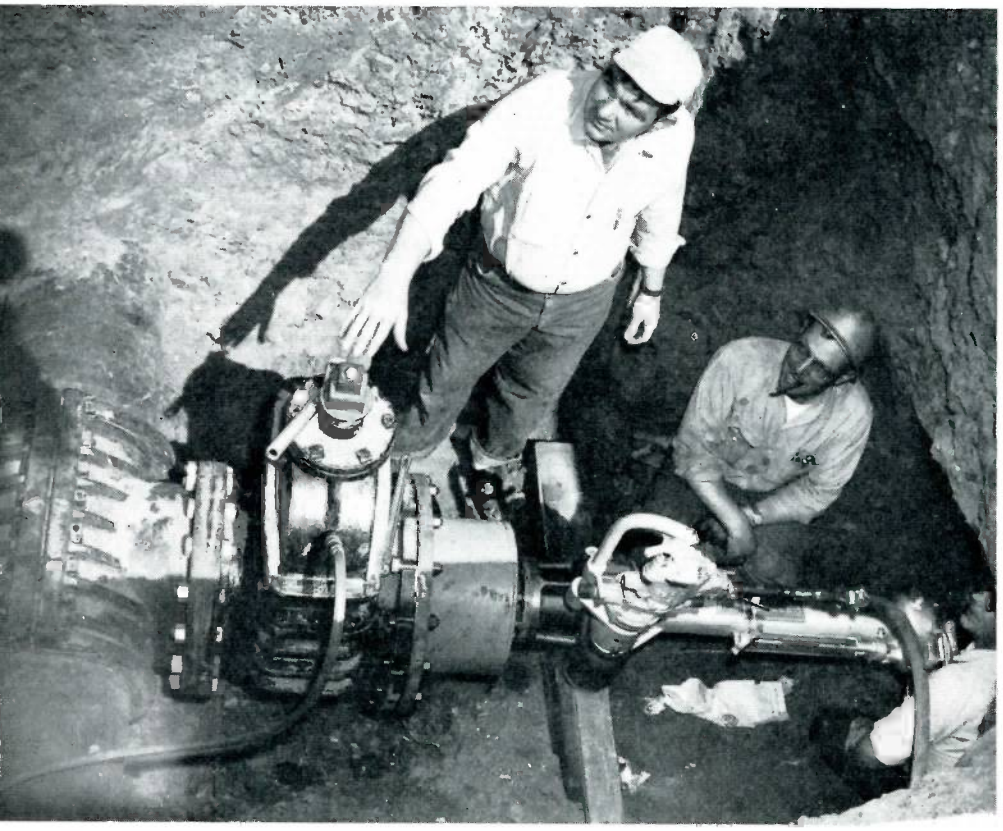
Today, the Schaefferstown Water Company holds the rights and properties of the old system and it now maintains the pipeline and watering spots.

Fountain Park is maintained in Schaefferstown and each year hundreds see this source for a water system which will be 200 years old next year.

Seldom does anyone take advantage of this free water supply. Instead residents use the modern, up-to-date system that delivers this precious commodity direct to the kitchens and bathrooms.

These two watering stations serve as constant reminders that the cost of city water does not represent the water itself. Customers are paying for the labor, materials and equipment needed to bring this service into the home.

Fountain Park is maintained at the spring site which feeds the seldom used watering spots. This spring became the source of supply for the first Schaeffertown Water Co., which was chartered in 1845. This water system began 199 years ago and is still serving its two original customers who are still its only ones.



Mueller tapping sleeve, tapping valve and drilling machine were used to begin the extension work recently undertaken in Fort Dodge. The 16-inch by 16-inch tap was part of two improvements which are expected to double or triple the available water supplies in some sections of the city.

FORT DODGE MOVES

John Pray's 59 Years Of Experience Guide Iowa Town In Modernization

Mueller Co. products and equipment played an important role in the recent expansion and modernization of facilities at Fort Dodge, Iowa.

This work is part of an overall plan recommended by City Utilities Manager John Pray, who has headed the Fort Dodge water system for 53 years. Mr. Pray's projected plan calls for a survey of needs in relationship to an eventual expansion of the present plant or its relocation to another site, and expanded supply.

The 81-year-old operation now serves about 9,000 metered customers through more than 100 miles of water mains. Extensions of portions of some of this underground network are part of the expansion that has been undertaken.

The most recent improvement was the installation of two main extensions in the northern and southern sections in this city of 30,000 persons in north-central Iowa. The north loop, about six miles long, begins at the city water plant and works its way through some of the highly populated areas of the city.

The two extensions are expected to double or triple the available supplies of water in the north, south and east sections of Fort Dodge.

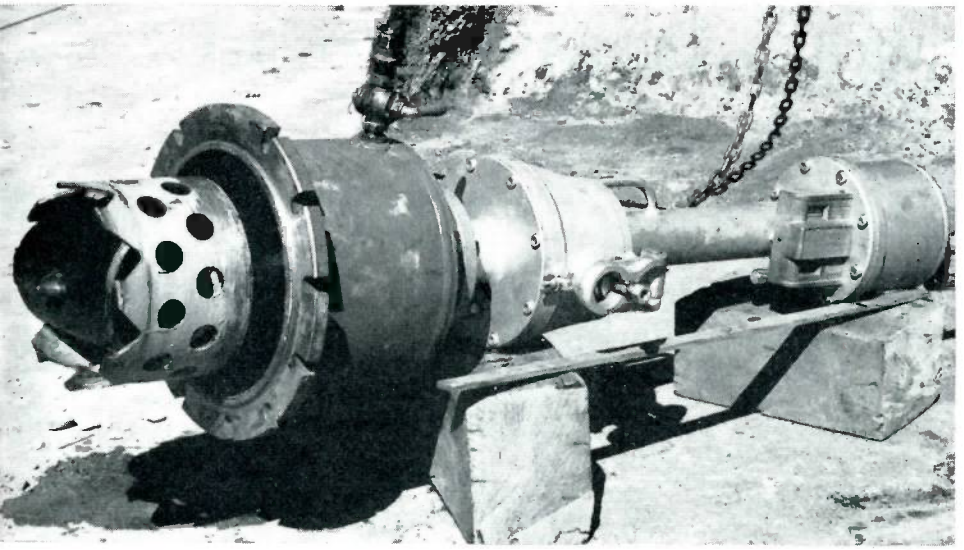
The water department requires only a portion of Mr. Pray's 59 years of experience in utilities. As City Utilities Manager, he is also in charge of the city hydroelectric plant, a part of the city street lighting system, the sewage treatment plant, storm and sanitary sewers, garbage disposal, and the municipal swimming pool.

Mr. Pray started with the water department as a meter reader in 1903. Six years later he took charge of the department, succeeding his father, the late William Pray. He has headed the city utilities operations ever since, watching and guiding the department's growth for more than half a century.

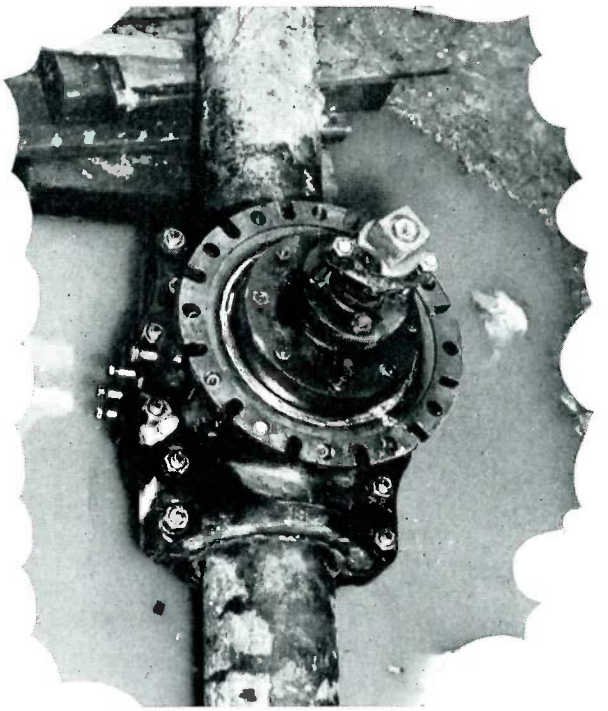
During most of his tenure with the Fort Dodge utility he has been active in the American Water Works Association. Mr. Pray joined the AWWA in 1913 and received the George Warren Fuller Award in 1939. Mr. Pray was Chairman of the Missouri Valley Section in 1929. He was also Chairman of the Iowa Section in 1947. He was a director from 1953 to 1956 and holds a life membership in the association.

The original source of water supply for Fort Dodge, the Des Moines River, was the sole source from the

John Pray, City Utilities Manager at Fort Dodge, Ia., has headed that city's water department for 53 of his 59 years in public utility service.



This Mueller CL-12 drilling machine has just made a cut in a six-inch main for a Mueller inserting valve. The inserting valve is installed in a system where additional control is required, but a shutdown would be impractical or hazardous.



The gate valve assembly of the six-inch inserting valve is lowered (left) into the adapter and then into the valve body. The near finished valve is shown at the right. Once installed, the inserting valve is operated like an ordinary gate valve—in fact, the valve mechanism is identical to the standard Mueller AWWA Gate Valve.

beginning of the plant in 1881 until 1906. The river continued to supply at least a part of the city's water until 1918, but the entire supply has been from wells since that time.

Fifteen wells have been drilled since the system switched to this source of supply, however, only five are now producing. Mr. Pray has recommended that a sixth well be drilled to increase the city's ground supply.

All five wells which supply Fort Dodge are of the artesian variety in that water level rises beyond the point where it was tapped. All were flowing wells originally but now they are pumped.

Deepest of the five wells goes to a depth of 2,300 feet in a hard rock formation. The others were sunk to depths ranging from 600 to 1,200 feet.

Fort Dodge continues to grow under the guidance of one of the nation's senior managers in the water industry.

An Eye Toward Improvement

New Warehouse Planned For Better Service

A large new warehouse at Mueller Co.'s main plant in Decatur has been designed to facilitate the storing, location and shipping of approximately 9,500 separate catalog items.

The shipping room and warehouse areas—a considerable portion of which have been put into use—will be increased by more than sixty percent when proposed plans are completed. The dock area will be several times the size it was prior to expansion.

In addition to physical increases, the expansion program provides for consolidation of carton storage, warehouse area, docks, shipping and traffic offices, and truck and rail loading facilities.

Products on hand range in size from set screws and washers for a CC-36 drilling machine to the 500-pound machine itself. A fraction of an ounce gasket sets the minimum weight of an item, while the heaviest article stocked in Decatur is a 1,300-pound, 14-inch gate valve for a 4-SW line stopping unit.

From the concrete floor, which is reinforced with tiny steel chips for longer wear, to the 10-

The shipping area of the new warehouse is shown above while the lower photo shows some of the vastness and diversity of the warehousing area. Three kinds of stocking racks are shown below.

(Photo Courtesy Decatur Herald & Review)

This remote controlled order picker was recently put into use at Mueller Co. in Decatur as part of an overall effort to speed service and shipments to customers.

inch-thick roof, the warehouse has been planned and designed with potentially-greater customer service in mind.

The new warehousing facilities are expected to provide the physical capacity for more expeditious handling of products and orders.

As aids to more efficient operation, Mueller Co. has introduced some equipment and methods which are relatively new. These include new racks and shelving, modern equipment for filling certain orders, and packing and weighing tables which eliminate many heavy chores.

The most interesting and unusual piece of equipment is a remote-controlled "order picker." This device lifts its operator to a maximum height of fifteen feet, where he can remove a single item from a shelf or rack, or maneuver the equipment so that it can lift a pallet or skid which contains a maximum weight of 4000 pounds. The novel feature of the order-picker is its ability to scoot through the warehouse aisles while the driver's platform raises or lowers according to the operator's needs.

An innovation for the new warehouse is a specially-designed packing table. After an order has been filled, it is taken to a packing table where the items are assembled, labeled and

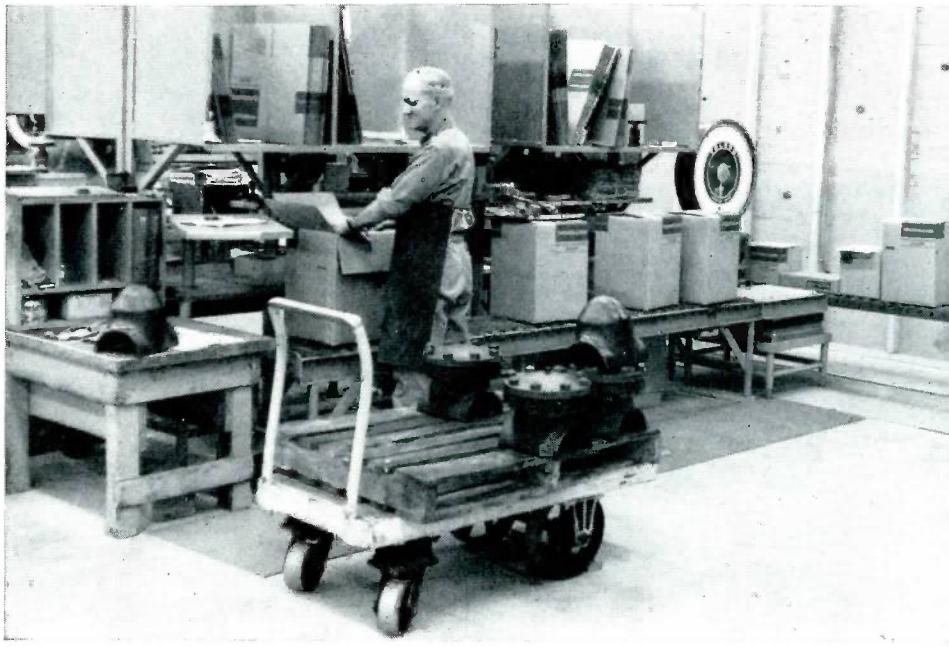
weighed for shipment. The worker doesn't lift a carton once he begins the packing and doesn't have to move but a few steps to get necessary materials. His packing table has various size cartons, labels, stuffing and products at arm's length.

Once a carton is filled the checker pushes the carton along a conveyor, which has a built in scale and then moves it on where it rolls out to the dock area.

Another addition to the warehouse is a drive-in type pallet rack. These racks are built so that lift trucks can drive right into them if necessary. Each bay holds 20 pallets; four deep and five high. These racks hold high volume items which are stored in super market fashion, that is, a certain products in a designated spot.

The drive-in rack is just one kind specially selected for particular products and uses. Some shelves or bins are arranged for small products and others are designed for the large, unwieldy and odd-shaped products.

This labyrinth of steel, bins, shelves, cartons and equipment contains thousands of items varying in shapes and weights.

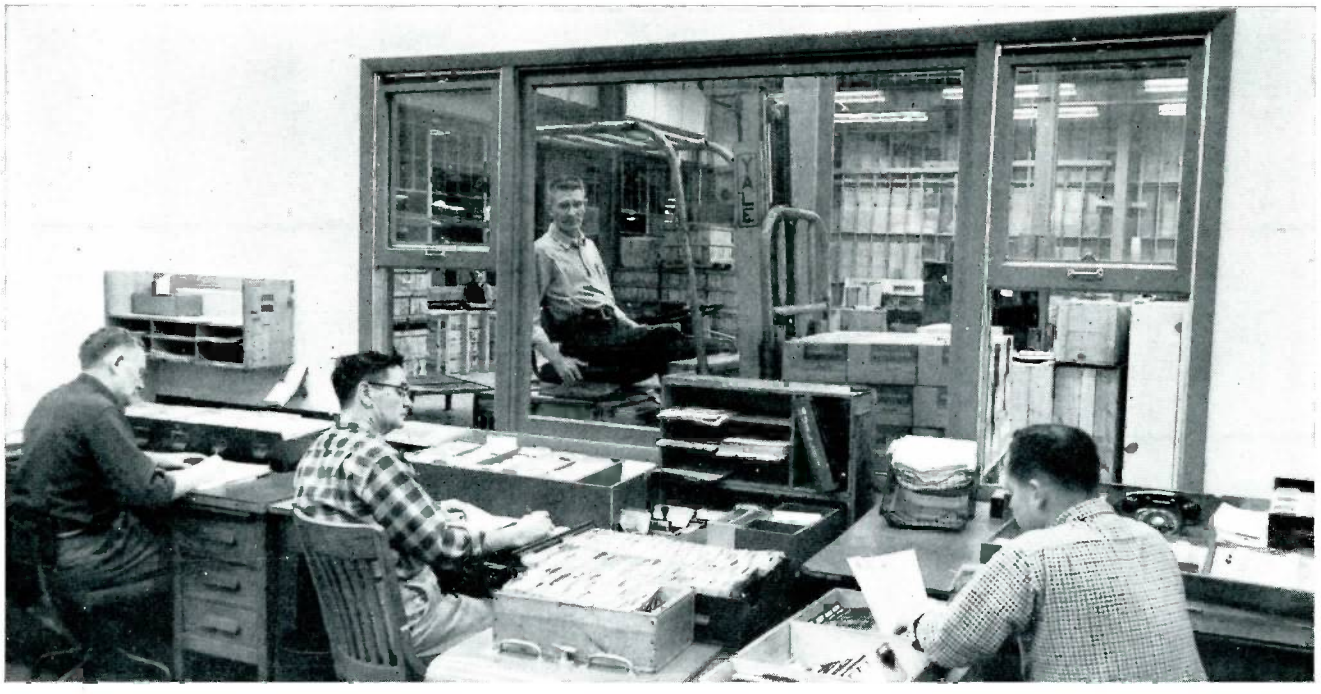


This specially designed packing, checking and weighing table provides the workman with all necessary materials at arm's length. The checker doesn't have to lift a carton once the packing begins. He just slides it along the rollers, with built-in scales, to the shipping dock.

A casual observer, unfamiliar with warehouse arrangement, would be quickly convinced that the entire building was arranged with no great thought given to detail.

A visit to the Dispatch Office —the nerve center of the warehouse—quickly dispels this idea. Here, everything is classified and carefully located; and from this point on, the warehouse "maze" suddenly becomes a well-organized operation.

The operations of the warehouse center around the Dispatch Office. At this point records are maintained which locate each item in stock. These men check products as they come from production centers and then locate each item for the customer's order.



Strictly *Off the Record*

A mother, annoyed because her 14-year-old daughter had been calling her boy friend too frequently, took a tip from a former wartime advertisement and posted a sign over the telephone: "Is this call necessary?"

Next day there appeared, penciled on the card a brief but logical reply: "How can I tell till I've made it?"

The cute little blond talking to the wealthy Texan..."How much did you say your name was?"

Teen-ager received heart shaped box of chocolates from current boy friend with card. "Valentine greetings to Pearl—with all my allowance, Bert."

Texan: "Good mornin'. It's a big, bright, wonderful day, ain't it?"

Automobile Dealer: "Yes, sir. Can I help you?"

Texan: "I hope so. My wife's coming down with the sniffles and I'm lookin' for some sort of get-well car."

It was at a large party in Fairbanks, Alaska, that a native Texan was regaling his companions with story after story of the wonders of his state. Finally a poker-faced native spoke up.

"Up here in Alaska where I come from, it's foggy all summer long—real pea-soupers. Then in the fall we have beautiful weather until the snow flies.

Curiosity got the better of the long-winded Lone Star Stater.

"What happens to the fog?" he asked.

"Oh," replied the Alaskan with a happy smile, "we hire a Texan to come up and blow it all away."

A man arose early one morning in order to surprise his family with hot oatmeal for breakfast.

He was dishing out a bowl for Jimmy, 3, when Jimmy walked into the kitchen.

"Want honey on it?" his dad wanted to know.

"Yes," said Jimmy.

"And milk?"

"Yes."

"Butter in it, too?"

"Yes."

He gave the bowl to Jimmy. The youngster stared at it, then pushed it away.

"What's wrong? I put everything you want in it," his dad said.

Answered Jimmy, "I don't like oatmeal."

During a recent convention in Miami Beach, a man walked into a women's dress shop and silently handed a saleslady a slip of paper which read:

"To whom it may concern: Since I am tired of returning black nightgowns, off-the-shoulder blouses, and similar articles after every convention, and since the bearer of this note seems to think I am exactly the size of the current sales person, here are some statistics and information: I am five-feet-three-inches tall, weigh 135 pounds, wear a size 13 dress and size 10 stocking. I do not like the color green, wide stripes, polka dots, or nylons without seams. Please do not sell him the most expensive gift in the store as we have to eat next week too. Thanking you in advance, I am, Sincerely, Wife of the Bearer."

A communist Party organizer wrote this despairing note to his Kremlin bosses:

"It is becoming increasingly difficult to reach down-trodden American masses.

"In the spring they are forever polishing their shiny new cars.

"In the summer they take vacations.

"In the fall they flock to baseball and football games.

"And in the winter I can't get them to leave their warm, cozy homes and TV sets to hear my lectures.

"How can I make these slaves of Capitalism see how oppressed they are?"

"How about letting management put up the signs around here?"

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