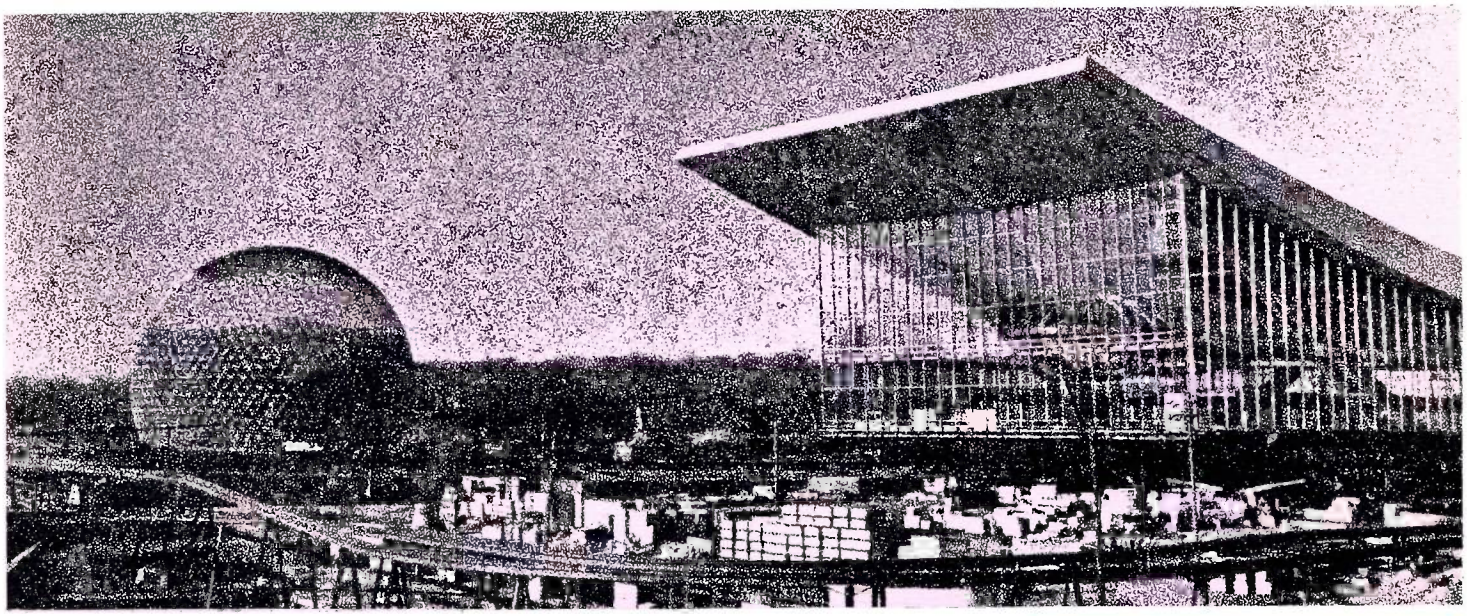
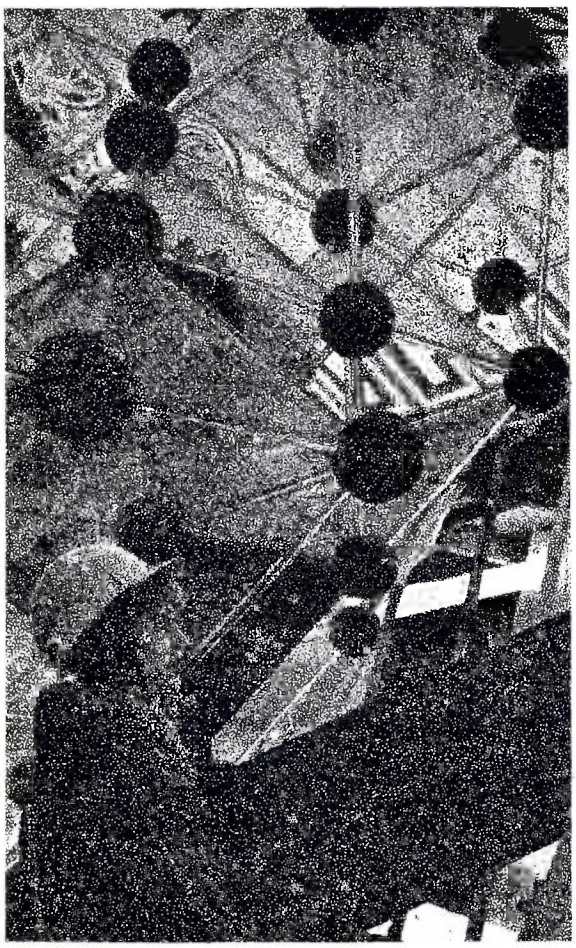
Mueller Record

APRIL-MAY 1967





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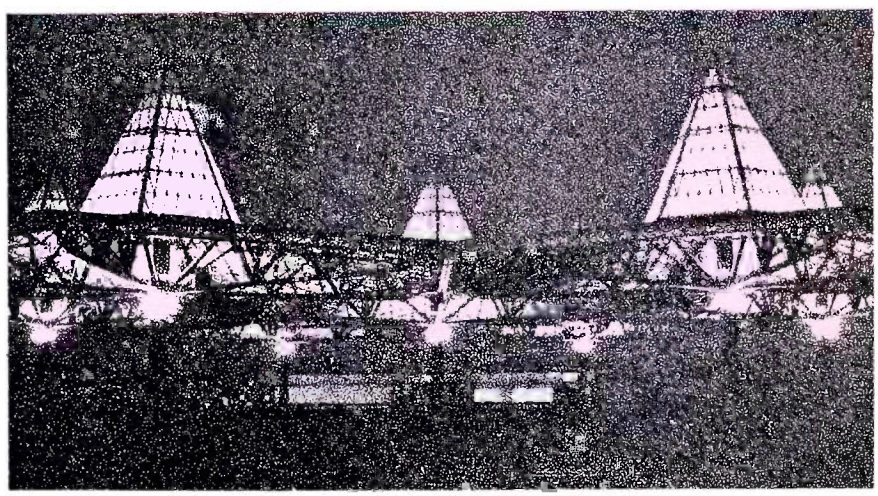

MUELLER RECORD

APRIL - MAY • 1967

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Editor

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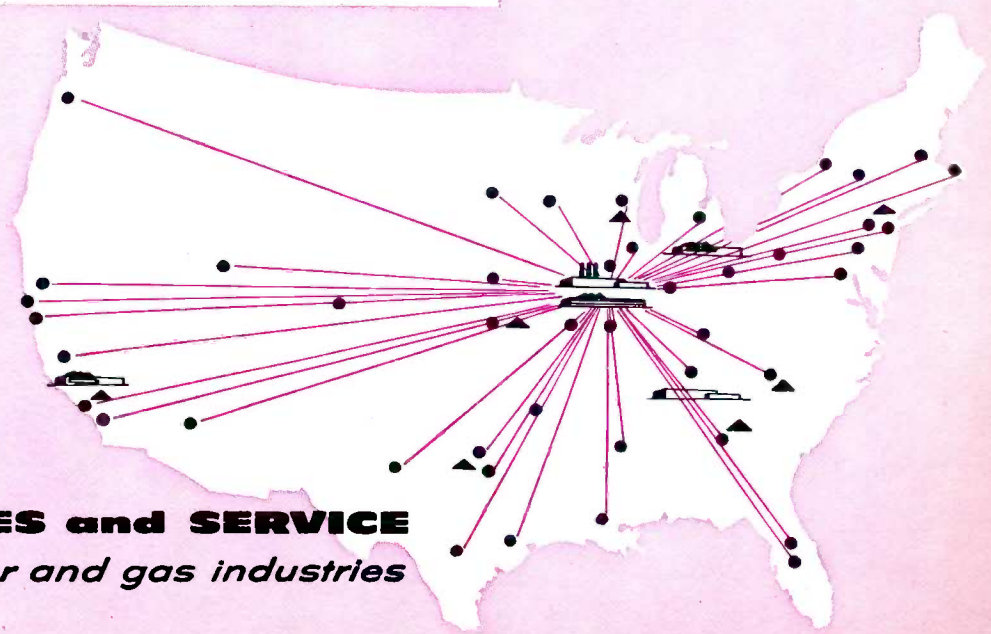
Contents

OUR COVER shows the U. S. pavilion (left) and the Russian pavilion in the top photo. The lower right photo shows the main box office at Expo 67 and in the lower left photo a young visitor looks at a huge display of atom patterns which are part of the Canadian exhibit.



visit montreal and see the world...

"TO be a man . . . is to feel that through one's own contribution one helps to build the world."

During six months of this year, some 70 nations will translate these profound words, through light, sound, color and form, into buildings, displays and events depicting "Man and His World," at the Universal and International Exhibition of 1967 in Montreal, Canada.

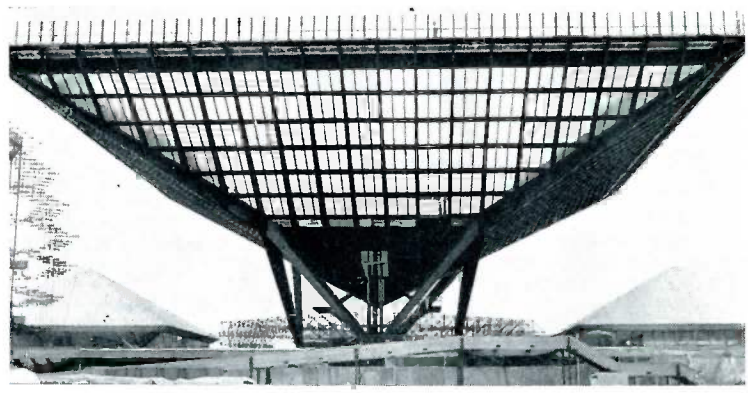
The Exhibition, better known as Expo 67, takes this theme from the book entitled "Terre des Hommes" by the French author, poet and aviator, Antoine de Saint-Exupery. The underlying philosophy of this work and that of Expo 67 is found in the above quote which comes from his book.

In developing this theme and presenting it in a tangible form, Expo 67 will seek to present not merely a static commemoration of man and his achievements, but rather a dynamic portrait of man in action. "Man and His World" will tell the story of man's hopes and aspirations, his ideas and endeavors, with the focus shifted from rivalries and differences between nations to the interdependence of men of all nations. The Exhibition will use the most modern display techniques to dramatize man's achievements in the realm of ideas, culture and science. And always the emphasis will be on the common bonds uniting the peoples of the world rather than on the differences, real or artificial, that tend to separate them.

One expression of this theme is Expo's official symbol or seal. The basic motif of the emblem is the ancient and universal graphic sign for worshipping man—a vertical line with outstretched arms. These signs are linked in pairs to represent brotherhood and friendship, and joined in a circle to symbolize the world.

For Canada itself, Expo 67 provides a unique opportunity to show the world as well as her own people what this country has accomplished in the 100 years since the separate provinces of British North America were united in a federal union on July 1, 1867. The response to Canada's invitation to participate in her 100th birthday has been overwhelming, and the largest number of countries ever to take part in a world exhibition is working toward Expo's opening on April 28.

expo 67



The central and most prominent feature of the Canadian pavilion is this great inverted pyramid called Katimavik, 108 feet high with sides of 192 feet, resting on four V-shaped columns.

The ingenuity and imagination of modern architecture are being stretched to the fullest to give an atmosphere of beauty and excitement to the whole Exhibition. The designs are bold and daring and viewers in 1967 will be just as shocked as those who saw the Eiffel Tower at the 1889 Paris Exhibition.

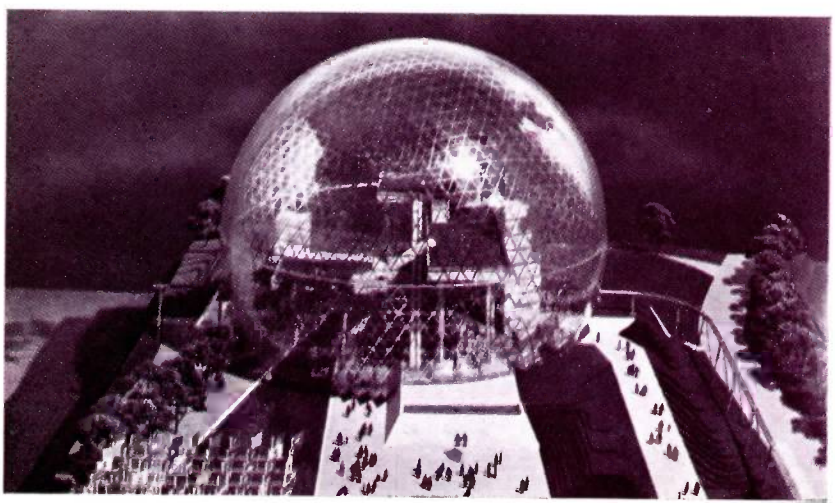
Expo 67 will influence the shape of cities and communities of the future. Those concerned with the problem of housing the world's greatly increasing urban populations will surely find inspiration in "Habitat 67," a fantastic housing complex which is a preview of one of the ways in which man may attempt to solve the problems of urban living in the future. This is a high-density housing project where a family can live in a self-contained unit which is one of 160 grouped in a 12-story structure and yet enjoy the amenities of a suburban house. These include a private exit to the street winding upwards from ground level and a private gar-

expo 67

Habitat 67 (above) is expected to be one of the most startling exhibits. Stacked like building blocks in pyramids, it consists of 158 housing units in a model, self-contained community with streets and gardens.

Unusual patterns are formed by the cone of beams which is part of the hall of " Man In The Community"—one of the many Buildings which are part of the overall theme of "Man And His World."

A huge bubble-dome—187 feet high and 250 feet across—encloses the U.S. pavilion. The geodesic dome is constructed of a lightweight metal frame covered with plastic and glass sheets. The underlying theme of the pavilion is "Creative America" with supporting exhibits to illustrate notable U.S. accomplishments in the arts, space and technology.



den on the roof of the dwelling below. The houses are completely prefabricated and assembled on the ground, then lifted into place by giant cranes. Thus Habitat 67, a revolutionary concept in housing, introduces mechanized and mass production into house-building on a scale hitherto unprecedented.

One of the most spectacular features of the Exhibition is the site itself. Set in the middle of the St. Lawrence River, with the Port of Montreal on one side and the St. Lawrence Seaway on the other, it enjoys a commanding view of both the busy waterfront and the ocean vessels and lake boats journeying to the heart of the continent.

Much of the 1,000 acre site is man-made. Nearly 30 million tons of fill were used to enlarge the existing island park of Ile St. Helene, create a new island—Ile Notre Dame—out of mudflats, and to extend Mackay Pier, formerly a breakwater in Montreal Harbor.

The islands are studded with little lakes and joined to one another by a series of bridges. The result is a charming setting of canals, lagoons and foot bridges. The pavilions and amusement centers are located on the built-up areas, and the original park facilities of St. Helene's Island have been preserved as a quiet retreat from the sounds and sights of the Exposition.

In the years of preparation since 1963, the face of Montreal has changed considerably. New hotels and apartments and all sorts of commercial structures have sprung up with extraordinary speed. Roads, subways, bridges and buildings have been constructed on an around-the-clock schedule. Much of this might have taken place anyway, but because of Expo many projects have been accelerated and the pace has quickened all round —not without a full measure of noise, dust and dirt and the exasperating traffic congestion that is an inevitable accompaniment of such activity.

These inconveniences have been easier to endure with the prospect of immensely improved transportation facilities after the six-month Fair, and with the thought that the Exhibition is expected to draw about 5 million paid admissions from some 10 million visitors.

Forty per cent of these people will be residents of Canada, with half of them coming from the Greater Montreal area alone. Fifty per cent of the visitors will come from the U.S.A. and the remainder from the rest of the world. Daily admission for adults is $2.50, with children under 12 admitted for half price.

Also at Expo will be natural gas. More than 90 per cent of the restaurants, which have a total seating capacity of about 23,000, will be using natural gas. The snack bars and restaurants will provide meals to suit every pocket and palate. Many of the national pavilions will serve exotic foods with the authentic flavor and atmosphere of their own country, so that Expo will be a veritable gourmet's paradise. The Soviet Union, alone, has ordered 20 tons of sturgeon, eight tons of caviar and 28,000 litres of vodka for its pavilion restaurants.

Quebec Natural Gas Company, which is furnishing gas and supervising the construction of the distribution system for Expo, was granted permission to put in its mains and services after all other utilities were buried, thus giving the gas company the assurance that its lines would not be disturbed by other contractors.

Quebec Natural Gas Company expects its total output for Expo to reach about 300 million cubic feet with peak periods reaching about 250,000 cubic feet per hour.

A feeder main operating at about 350 psi, running under Jacques Cartier Bridge, connects with approximately eight miles of distribution main where the pressure will be reduced to about 60 psi for the 225 services in the system.

In addition to the varied uses of gas in restaurants, about 70 per cent of the breath-taking pavilions will utilize natural gas for such things as heating, cooling and special effects. These pavilions of the 70 nations plus those of private participants follow the main theme of the Exhibition by showing man's progress and interdependence through displays and exhibits which include fine arts, science and technology.

Canada's $21 million exhibit, the most expensive of Expo, shows man in the Canadian environment and the way in which its people meet the challenge of climate, distance and communication.

Other national themes range from South Korea's "The Hand of Man" to the Soviet Union's "Everything in the Name of Man for the Good of Man." The USSR's $15 million building is a massive cantilevered structure, with a long sweeping roof supported by great steel arms in the shape of the letter "V." It is connected by a bridge with the equally striking U.S. building which cost about $9.3 million. It is a huge, transparent bubble, known as a geodesic dome, rising 20 stories high and dominating the entire Exhibition.

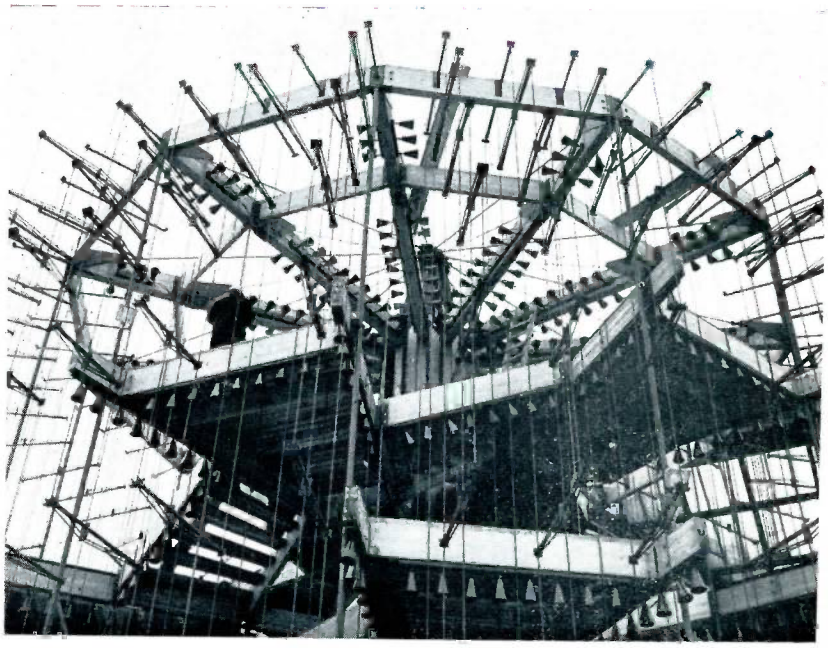
Among the many other outstanding structures will be the 25,000 seat Expo Automotive Stadium which will be the site of several international sports events and spectaculars, including rodeos, soccer matches and military pageants.

Expo's World Festival of Entertainment is perhaps the most ambitious program of entertainment

Much of the 1,000 acre site is man-made. Nearly 30 million tons of fill were used to enlarge the existing island park of Ile St. Helene, top center, to create a new island—Ile Notre Dame (right) and to extend Mackay Pier (lower left)

A workman makes last minute preparations for the opening of Expo 67 on April 28.

This "People Tree", used primarily as an observation tower, is part of Canada's 21 million dollar layout.



expo 67

ever planned to take place in one city over a six-month period. The long list of the festival of performing arts includes such names as: La Comedie Francaise, La Scala Opera Company, the New York Philharmonic Orchestra, the Red Army Chorus, the National Theatre Company of Britain and the Kabuki Theatre from Japan.

For those interested in lighter entertainment, there is the 135-acre La Ronde amusement park—a combination of Copenhagen's famous Tivoli Gardens and California's Disneyland. It will offer a wide variety of shows and rides aimed at pleasing all ages and all tastes.

The Universal and International Exhibition of 1967 has something for everyone. Measured in terms of area, of national participation, of interest and entertainment for visitors, of cooperation between widely diverse interests, there has never before been such an Exhibition.

The total cost of the Exhibition will be about $333 million, with an estimated net cost of about $83 million being carried by the Federal Government of Canada, the Province of Quebec and the City of Montreal. There is little doubt, however, that the net cost will be more than offset by very substantial direct and indirect revenues that will accrue from Expo 67 to the people of Canada.

For Canada, this marks a point where the nation's maturity is recognized by her own people and by the rest of the world. It is an instrument of national consciousness, and contribution to man's unity.

Checking a tap being made with a Mueller D-4 Machine at Expo 67 are, from left, Mueller, Limited Sales Representative Art Hutchingame; G. F. Proulx, Chief Inspector for Quebec Natural Gas Company; M. Perron, Chief Inspector for the gas distribution system at Expo 67, and Mueller, Limited Sales Representative Wilf St. Cyr.

Mueller In Canada

Mueller, Limited, which has been in Sarnia, Ontario, since 1912, and one of its divisions, St. Jerome Industries, Limited has supplied a vast amount of materials used at Expo 67.

In addition to producing many products for the water and natural gas industries, Mueller, Limited also manufactures a broad line of plumbing goods, flush valves and Streamline solder fittings. These products will be found in abundance at Expo 67, just as they are found all over Canada.

St. Jerome Industries of St. Jerome, Quebec, primarily a foundry producing municipal castings, has supplied nearly all of the catch-basin frames and covers, cast iron traps, and similar material used at the Exhibition.

A third member of the Mueller Canadian organization is Mueller Industries, Limited, St. Jerome, Quebec, which is a distribution center serving the Province of Quebec, the Ottawa Valley and the Maritime Provinces.

Burned LUBOSEAL® Tested

Design Superiority Is Reconfirmed For Mueller Stop

When a fireman or a gas company employee attempts to turn off a stop at the gas meter during a fire it is vital that it work, thus eliminating the threat of fire feeding upon the natural gas that would otherwise be contained in the building. It must turn and seal properly even though during the fire the stop may be subjected to temperatures that will melt the case of an adjacent meter and destroy the building to which the gas line is linked.

Many times we hear about the jobs gas stops are called upon to do in these emergency situations, but it is seldom that the Mueller Engineering Division has the opportunity to run extensive tests on a stop that has been through such a severe trial.

Recently, however, Mueller engineers ran a series of checks on a ¾-inch H-11175 LUBOSEAL® gas stop that had been salvaged from a house that had been virtually destroyed by fire. The results of this test further substantiated Mueller Co.'s conviction that the iron body—bronze key type of construction remains superior to others proposed, including those which have keys made of materials with much lower melting points or depend upon more resilient materials for

Burned LUBOSEAL which went through series of tests.

JOLLY RETIRES

Midwest Salesmen Honor Manager Of Their District

"May the best of the past be the worst of the future."

These words are inscribed on a plaque presented recently to Russell L. Jolly upon his retirement as Mueller Co.'s Midwest District Sales Manager. The quote expresses the sentiments of the six men who worked as sales representatives in his district and shows the strong feeling they have for this man who has been Manager of the Midwest District since 1958.

Russ started with Mueller Co. in Decatur in 1924 and today, even though retired, he remains active as Sales Management Consultant. Under this special arrangement, his broad product knowledge will still be available to the water and gas industries as well as to Mueller Co. He will have an office in Decatur and will be able to maintain many of his relationships with friends and customers through convention activities and special business calls.

During his 42 years with Mueller, Russ has the distinction of being one of very few in the company who have worked at all three Mueller plants in the U.S. and who have spent time in Engineering, Manufacturing and Sales. His first year with the company was spent in Engineering and he then "went on the road" selling in western Pennsylvania and West Virginia. His sales activities have taken him from Boston to northern California and from Chicago to Kansas.

At the time of his retirement he supervised sales in Kansas, Iowa, Missouri, Minnesota, North and South Dakota, Colorado, Wyoming and in parts of Illinois and Montana.

Forty years of work can hold many gratifying moments, but Russ most cherishes the feeling that he had a part in the progress made by the water and gas industries.

"It makes you feel good to know that you and your company were involved in the advances made in these important activities," he says, in summary.

Succeeding Russ as Midwest District Sales Manager is Matt D. Sylvan, who has been the Mueller sales representative in Kansas and western Missouri since 1957.

Art McPherson, who has been a member of the Mueller Industrial Sales Division for four years, has assumed Sylvan's former duties.

seating. The safety factors found in the Mueller stop are important considerations when figuring the total cost of installing such a vital item in a service line.

The tests by Mueller were made possible when Lorin E. Grosboll, a Mueller Co. Sales Representative, sent in a LUBOSEAL that had been in a fire in South Carolina. He reported that the stop and meter setting had been located alongside a house that was almost destroyed in a blaze. He said one of the first things firemen did at the scene was to turn off the stop. The blaze got so hot at one time that the "meter and regulator melted and formed big globs, and hung." When the fire was about out, observers noticed a little fire around the meter stop, but it was small and did not cause a problem.

From examination of this stop and from descriptions of the scene, Mueller engineers determined that the stop had been subjected to temperatures of from 1,000 to 1,400 degrees Fahrenheit.

Since the grease on the stop had been destroyed by the heat, the stop leaked during testing, but regreasing reduced all leaks to zero—even at 125 psig. Since the stop was being examined critically, it was subjected to further tests which revealed that the leaks returned after turning—but a second greasing again reduced the leaks to zero. After standing for a few hours without the key being turned, the stop developed negligible leaks at the top and port but none was reported at the base.

Metallurgical examinations of the bronze key indicated some melting of the lead phase of the material, with some slight evidence of breakdown of the bronze along one side. Uneven turning also indicated that the shape of the key had been distorted.

Walter J. Bowan, Chief Research Engineer, concludes in his report that the tests of the LUBOSEAL give a clear indication of the advantages of metal plug valves over soft seat designs in case of fire.

In the case of the former design, there is always a metal plug across the line which continues to function after the grease has been destroyed. Due to expansion differential where the bronze expands faster than the iron under high temperatures, the fit of the key and body are likely to be even tighter in a fire. In addition, the charred "O" ring continues to act as an effective barrier, further reducing the chance of any leaks.

Mueller Co. suggests that in cases where stops have been subjected to fires and high temperatures it is a good preventive maintenance practice to replace the stop even though it appears to be working satisfactorily after regreasing. Due to the stop still being in a condition that permits it to be turned off and on, Mueller meter stop changing equipment can be utilized and the stop changed without turning off the service line at the street.

Mr. Bowan's report covers only the one stop tested and cannot be used as a generalization for the performance of all LUBOSEALS in every type of fire. It does, however, confirm once again the company's long-established opinion about the superior design of the LUBOSEAL—a conclusion that is the result of many tests over the years. The LUBOSEAL is not a new stop and its dependability has been proved.

Members of Mueller Co.'s Midwest Sales District recently presented Russ Jolly (third from the right) with a plaque marking his retirement as District Sales Manager. Making the presentation are, from left, Dick Seevers, George Swanson, Matt Sylvan, Bill Coffey, Art McPherson and Ken Tohill.

Mueller Co. Export Manager Joe Keating (left) accepts a diploma from the Mexican Natural Gas Association for Mueller Co.'s participation in the group's first national convention which was held in Mexico City.

Mueller Active At First Gas Assn. Meeting In Mexico City

A demonstration of Mueller Co.'s No-Blo method of handling natural gas was part of the first national convention of the Mexican Natural Gas Association which was held in Mexico City recently.

The No-Blo demonstration was essentially that of the Mueller Co. mobile training school that has been covering the United States for more than a year, offering to gas company employees instruction in the proper use of Mueller machines and products.

In a letter to William E. Murphy, Vice President—Marketing, which invited Mueller Co. to participate, Manuel Bernal, President of the Mexican Natural Gas Association, said: "As we know of your background in these matters, and knowing of your capacity and your high technical responsibilities within the gas industry, we are pleased to invite you to attend all of the scheduled events, with the understanding that your presence among us will be highly honored."

The first four days of the session were devoted to metering, pressure regulation, telemetering and automatic controls. Most of the fifth day was set aside for a talk on Mueller products delivered in Spanish by our Export Manager Joe Keating and for a demonstration of the handling of gas by the No-Blo method by Instructor Cecil Williams. Keating also served as interpreter for Williams' portion of the program.

The Mueller demonstration equipment doubled as part of our exhibit which also contained a number of Mueller products designed primarily for the water industry. These were included because many of the men in the gas industry in Mexico are also active in other phases of the government-owned utilities.

Mueller was one of the recipients of a diploma from the Mexican Natural Gas Association which reads in part: "The Mexican Natural Gas Association is pleased to present the diploma to the Mueller Co., in recognition of its kind participation in the Technical-Industrial Exposition on the Uses of Gas."

Cec Williams (left), No-Blo School Instructor, discusses line stopping equipment with some members of the Mexican Natural Gas Association.

Thank God for Mueller Products...

"Thank God for Mueller Co. products and its field supervisor!"

These forceful words scrawled across the bottom of a work report only hint at the gravity of a gas main break which happened recently at Battle Creek, Michigan, although they summarize the vital role played by Mueller Co. service, products and people.

With temperatures hovering near zero and Battle Creek residents digging out of a 40-inch snow cover, a split occurred in a 16-inch section of a gas main, leaving a major portion of the northern section of the city without service.

During the 14 hours the 1,500 customers were without gas, as temporary repairs were being made, a Mueller field supervisor, Lindle (Hap) Hockman, and Mueller equipment were speeding toward Battle Creek by truck and plane to help restore service.

By the time a semi-permanent setup was installed—to handle demands until moderating weather would allow full renovation of the area involved—it was a thrilling story of cooperation and help from many. Men and equipment were sent from the Southeastern Michigan Gas Company at Port Huron, Michigan. Mueller products came from Sarnia, Ontario, and Decatur, Illinois, and more than 50 people were involved.

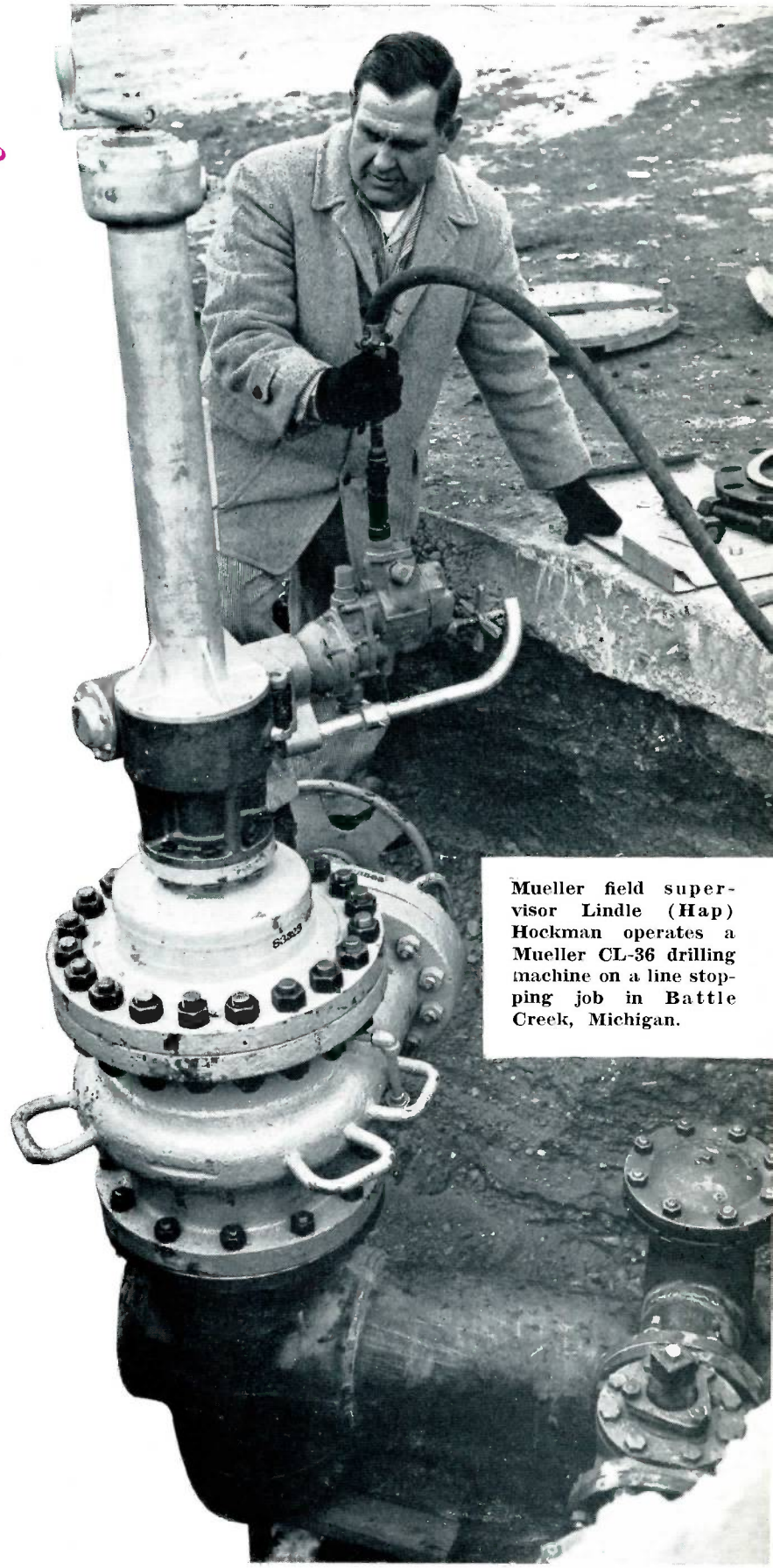
Claude C. Wall, General Superintendent of the Battle Creek Gas Company, in a letter to Mueller Co. officials, relates the company's part in the emergency. His letter reads:

"I want to express our appreciation for the outstanding service and cooperation we received from the Mueller Co. and their employees during the emergency repair of a rupture on one of our high pressure feeder mains. From the first telephone contact with Mr. Rohman (W. C. Rohman, Sales Service Manager—Gas, Decatur Sales Office) on Monday morning, Feb. 6th, to the time of departure of Mr. Hockman on Thursday, your employees demonstrated more than 200 per cent efforts is assisting us with the emergency.

"Although I certainly hope we will never experience a similar incident, knowing companies like Mueller are connected with the gas industry makes our jobs just a little easier." (Words such as these from a customer make the jobs of Mueller Co. employees a lot easier!)

The situation in Battle Creek on the frigid morning of February 6 was not an easy one to correct and it demanded ingenuity, diligence, cooperation and plain hard work.

The rupture occurred Monday about 7 a.m. on a 16-inch section of a feeder line operating at a pressure of 22 psi. The five-foot long split was



Mueller field supervisor Lindle (Hap) Hockman operates a Mueller CL-36 drilling machine on a line stopping job in Battle Creek, Michigan.

on an exposed section of pipe attached to a bridge over a dry creek bed. This 16-inch section of pipe was about 50 feet long and made from steel plates fabricated by a local shop. Each end of the section reduced to 12 inches, which was the size of the main.

This main not only supplied low pressure district regulators in the northern section of the city but, likewise, individual customers connected to the high-pressure main. In addition in a high pressure feed from a central point of the distribution system, Battle Creek also supplies this feeder main with a high pressure supply from the extreme north end of the main. (The entire distribution system might be compared to a wheel with a central supply at the hub going into the feeder mains and a loop or "rim" supply encircling the system and feeding high pressure gas back into the feeder mains.)

Mr. Wall said, "When the rupture occurred, approximately 500 feet from the central or 'hub' feed, the pressure was immediately lowered to control the amount of gas leakage. However, due to severe weather conditions, we were unable to maintain sufficient gas pressure in certain portions of the affected feeder main. As a result, service regulators on services supplied directly from the feeder main snapped off due to a low pressure shutoff feature. Appliance safety pilots on the low-pressure distribution system also snapped off when the pilot flames dropped away from thermocouples."

As the seriousness of the situation became more evident, Mr. Wall contacted the Mueller office in Decatur to check on line stopping equipment, fittings, machines and a supervisor to oversee this use. Once needs were determined, Jim Jones and Willie Rohman in the Sales Office and George Binkley in Engineering began working immediately to check out, test and assemble all necessary material. Simultaneously, "Hap" Hockman went home to pack his suitcase and Clifton Engineering Co., Inc., gas line contractors of Three Rivers, Michigan, dis-

Workmen loading Mueller equipment are silhouetted in the early evening hours prior to returning to Battle Creek. In the shadow at the right is Jim Jones of the Mueller Sales Office.

Hap Goes "By the Book"

Appropriately using the U.S. Navy term, Lindle (Hap) Hockman says he likes things "Squared Away." Liberally interpreted, this means doing things in the proper manner or "Going By The Book."

"Going By The Book" comes easy for Hap, as he spent 21 years in the Navy before joining Mueller Co. in 1958. The disciplines he learned in the Navy carry over to his work as a Field Supervisor, where he advises Mueller customers throughout the country on the proper use and methods of Mueller machines and fittings.

The "Book" he goes by is no longer the Bluejacket's Manual, but today it is the whole library of blue-jacketed instruction manuals furnished by Mueller Co. as the procedure guides for operating its machines and equipment.

While the Mueller Sales Representatives are capable and willing to assist customers in the use of products, and often find themselves in the ditches with the workmen, Hap goes on specific jobs with rental equipment where the operators are usually unfamiliar with machines and methods.

Hap is known throughout the United States by gas customers and contractors who have relied upon his ingenuity and know-how to complete a line stopping job on a high pressure transmission line or a lateral connection in situations that were unusual or unfamiliar. He says there is no real secret to handling gas, but you must not take shortcuts or chances. He maintains that many experienced workers don't respect the potential dangers of natural gas. "If properly handled, natural gas is safe, but some men get careless because they fear only the things they can see," Hap said.

In referring to the "Book," or in this case the operating instructions for the specific piece of equipment involved, he says: "Much research and study have gone into producing the information in our operating books. Engineering lab tests and field tests, data studies and calculations were made to determine the easiest and best way to run a C1-36 machine or the safest method to stop off a main. It may seem unnecessary in some cases to perform an aligning operation or to put in all of the bolts on a line stopper fitting, but everything is done for a reason, and I try to follow instructions to the let-

Hap Discusses And Ponders

patched two men and a truck to Decatur to pick up the equipment. By noon, the Mueller material was assembled on the shipping dock. Since all flights out of Decatur were filled, Hockman had to be driven 40 miles to Springfield, Illinois, where he caught a commercial plane for Chicago.

Back in Battle Creek, a temporary repair was put on the split, gas pressure at the central point was increased to 10 psi, and the resetting of regulators and pilots was started. About 40 servicemen were used to reset the 150 regulators and the 1,500 pilots. By 9 p.m., or 14 hours later, every customer was back on service—but the basic problem still remained.

Monday evening, Hockman arrived in Battle Creek, and the two men with the truck and equipment were about halfway back to Battle Creek. Line stopping operations were to begin the next morning with a single 12-inch cut being made in the main about a block from the damaged area. At this point, a 10-inch feeder main runs parallel to the damaged main to the north part of town. The plan was to run connecting lines from the 10-inch to the 12-inch main, supplying the gas from the smaller to the larger by increasing the latter's pressure.

Originally, the thinking by Battle Creek Gas was to use two or three 2-inch lines between the mains, but there was some question whether these lines could carry the necessary supply. The Mueller representative suggested using two 6-or-8-inch flanged tees for the by-pass so that there would be no question about their capacities to carry the load. This was agreed upon by everyone, but the tees weren't available in the city. At this point, the Southeastern Michigan Gas Company at Port Huron was called. It sent a crew across the St. Clair River to Mueller, Limited, in Sarnia, Ontario, to obtain the fittings. A Southeastern truck and crew brought the six-inch fittings and necessary drilling equipment to Battle Creek on Tuesday evening, and on Wednesday the project was undertaken.

With the proper equipment and know-how, only a few hours were required to effect the switchover, Wednesday. Methodically moving through operations under Hockman's guidance, workmen quickly made the cut in the pipe for the line stopper, installed and drilled the 6-inch tees which put the connecting lines in operation, stopped off the main, cut the pipe, and installed a valve behind the line stopper fitting which gave them a means of control until the damaged section was replaced. The increased pressure on the smaller line provided an adequate supply for the 12-inch main and all stations then registered normal working pressures.

As if one break were not enough, a "frost heavage break" occurred on Tuesday night, on a 6-inch cast iron main feeding from the 12-inch main, and this, too, had to be repaired Wednesday, along with the other work being done.

The project finished, Hockman returned, arriving home at 1 a.m., Friday. A few hours later he was checked over by a physician who confined him to bed for several days, as the chills and cold he had picked up on the previous job and had aggravated in Battle Creek were leading to pneumonia.

It was a week of consternation and cooperation in Battle Creek—and a situation with which every gas company employee can sympathize. It was also a week of accomplishment for the many Mueller people who were able to help a customer with a problem!

ter to be sure that the customer has the best job possible."

Obviously, Hap is extremely serious about his work, but at the same time he is a personable man who likes to laugh, tell sea stories and meet new people. On his job, he has plenty of opportunities to meet people and help them. Last year, 13 special assignments took him from Florida to New Hampshire and from Iowa to Delaware, and he has been following a similar schedule since 1962. That year he was promoted from Test Lab Technician in Decatur to Lead Man, and at present, in addition to his field work, he is responsible for about a dozen testers and technicians in the Mueller Engineering Test Lab. He says one of the rewards of the field job is the opportunity to help people who are having trouble.

"People appreciate being helped, and when you're busy trying to help solve someone else's problems you forget about your own," he says.

Hap gives credit to his Navy career for his ability to work with people. Although he grew up a great distance from the sea, Eagle Grove, Iowa, he joined the Navy as soon as he was old enough. The first 10 years, 1938 to 1948, found him aboard some type of ship. The first seven years were spent on the U.S.S. Saratoga, and he rose from an apprentice seaman to warrant officer. After the Second World War his rating was reduced to Chief Machinist Mate and the sea duty found him on seagoing tugs, a cruiser, an aircraft carrier and a destroyer. He climaxed this term of sea duty with a seven-month cruise completely around the world.

His first shore assignment was that of instructor at the machinist school at Great Lakes Training Center near Chicago. One of his most interesting assignments followed when he and his wife spent from 1952 to 1955 in Guayaquil, Ecuador, where Hap was on U.S. mission duty and served as a technical advisor to the Ecuadorian Navy.

Following this, he returned to sea, and then completed his career in the Navy with a two-year tour of duty at the Great Lakes Recruit Training Center. He termed his interval as a recruit company commander as the most rewarding, while being the most frustrating, time in service.

"To be able to see a group of young men you've worked with change from ragged recruits to disciplined sailors in a few weeks is extremely satisfying, but there are times when you are sure they all have two left feet," he recalls.

Hap took his retirement in 1958 and just "happened" to hear about the Test Lab job at Mueller Co. Mueller couldn't offer him a sea voyage around the world or an assignment in South America, but he is seeing the United States and, more importantly, helping customers.

National Sales Conference

"This Sales Conference has been valuable for many reasons, but primarily, it has impressed upon us the fact that we all have the same goal—that of furnishing our customers with the best products and service available. Each division has its own special problems that relate to all of us, but we are all working together toward the same objective, and I'm proud to be a part of Mueller Co."

From the response that followed this spontaneous comment, it was obvious that Midwest District Sales Manager Matt Sylvan had expressed the sentiments of every one of the 70 men in the meeting. It seemed a fitting tribute to the ending five-day National Sales Conference held by Mueller Co., as it summarized the effect of the five days of hard work, diligence and association. The results of a successful sales conference, it was agreed, are not totally reflected by increased sales or on a profit-and-loss statement, but also by intangible results which can be felt in the atmosphere and picked up in attitudes.

Participating in the session which opened in Biloxi, Mississippi, on February 5, were all of the Mueller Co.'s outside sales representatives and district managers, as well as sales office representatives from Decatur, Chattanooga and Brea; a number of company officers, including President John F. Thurston; and men from Headquarters Manufacturing and Engineering.

The program had as its basic theme "The Important Role of Communications." It was designed by William E. Murphy, Vice President—Marketing; Del Parks, General Sales Manager; and Hugh L. Baker, Advertising and Sales Promotion Manager.

Dealing specifically with communications were such experts in the field as: Dr. Herbert E. Metz, Educator and Lecturer from Washington University; Cavett Robert, General Manager of Professional Sales Products of Phoenix, Arizona, and Stephen P. Bellinger, General Manager of Radio Station WDZ, Decatur.

The program for Tuesday, which ran from about 7:30 a.m. until about 10:30 p.m., was devoted primarily to Mueller products and product engineering. The day included round table discussions on products by salesmen who exchanged ideas and methods with one another. The topic "Sales Features of Present Products" was discussed by Frank H. Mueller, Vice President—Engineering; John J. Smith, Chief Products Engineer; and Carl Floren, Group Project Engineer, who then in the evening gave everyone a preview of some of the plans and products for the future.

Wednesday's program included: "Information Center—Decatur," by Charles O. Bafford, Decatur Sales Office Manager; "Data Processing —Present, Future, and What it Means to You," by Harlan A. White, Vice President—Administration; and "Mueller Facilities" presented by Paul Hickman, Vice President—Manufacturing, Lloyd W. Darnell, Assistant to the Vice President—Manufacturing, and Frank C. Hackman, Manager of Manufacturing Engineering.

Thursday was devoted to traveling to Chattanooga, Tennessee, where the group re-convened Friday for a tour of the new Mueller plant there and for the concluding formal sessions.

Each day started with wake-up calls at 6 a.m. and went well into the night with informal "gab" sessions in motel rooms. At week's end, the busy schedule left everyone physically tired but psychologically revived, and all returned to their homes with fresh enthusiasm, increased knowledge and a much better understanding of the interrelationship of Sales with Manufacturing, Engineering and all other departments.

This photo, taken the last day of Mueller Co.'s National Sales Conference, shows the concentration, attentiveness and interest that prevailed throughout the week-long session.

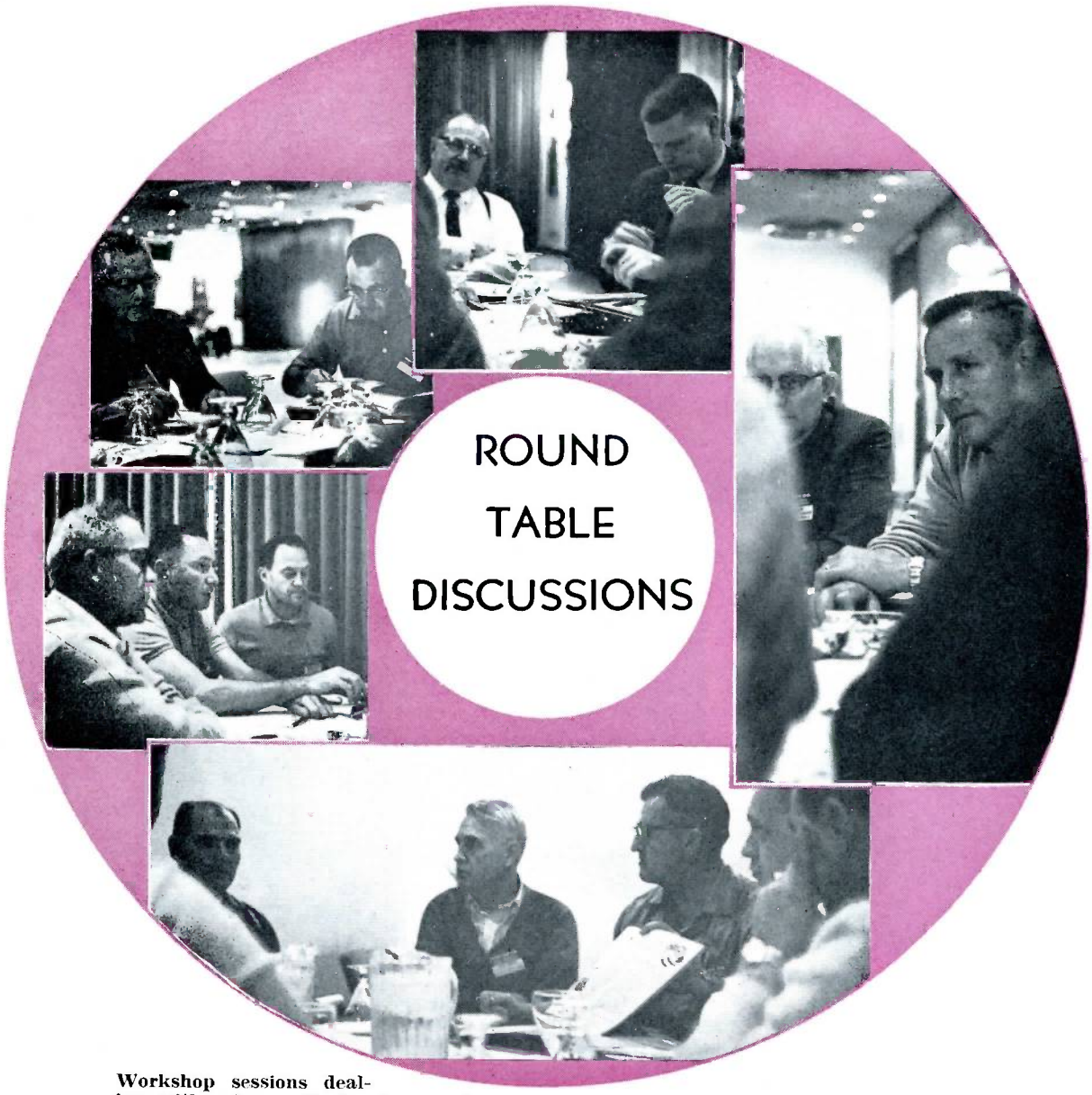
One of the highlights of the conference was a tour of the new Mueller plant in Chattanooga. Watching the progressive assembling of a gate valve are, from left, John Thurston, Del Parks, Russ Jolly, Bill Murphy and Hugh Baker.

Paul Hickman (center), Vice President—Manufacturing, chats with Sales Representative Bob Lugo (left) and George McAvity, President of Mueller, Limited.

Charlie Moore, Assistant Plant Manager—Machining and Assembly Division, Chattanooga, stands to answer a question asked by one of the salesmen. Following a tour, a panel of Mueller men familiar with the Chattanooga operations discussed the plant. Members of the panel pictured are, from left, George Piper, Frank Hackman, Moore, Stan Kuhne and Bob Rhodes. Panelists not pictured were Joe Wall and Verle Utzinger.

Leaning forward to catch every detail are, from left, Herm Niehaus, Tom Little and Jim McClintick.

Harlan White, Vice President — Administration, discusses data processing.



Workshop sessions dealing with sales methods of present products were taken seriously as proved by these candid photos snapped during the round table discussion.

After working until 10:30 p.m. Tuesday, the men were given some time for relaxation the next afternoon. Many of them braved the chilly winds to head for the golf course. Watching (and probably heckling) Stan Lee are, from left, Dic Kahl, Bob Martin and Don Kelley.

W. E. (Bill) Murphy, Vice President—Marketing, "takes the stand."

Don Cobble (left), Sales Service Correspondent at the Chattanooga Sales Office, chats with Sales Representatives Ben Lentz (center) and Ed Fenstad during a tour of the Chattanooga plant.

Intently listening to the speaker are, from left, Ray Gentry, Kenny Potts, Warren Crawford and Ben Lentz.

A question is posed by Lou Mautz (standing) while Dick Medick intently awaits the reply.

The inside of a bus became familiar to everyone as the result of tours and location changes.

Frank Mueller (left) and Walt Arnett renew their acquaintance during a session break.

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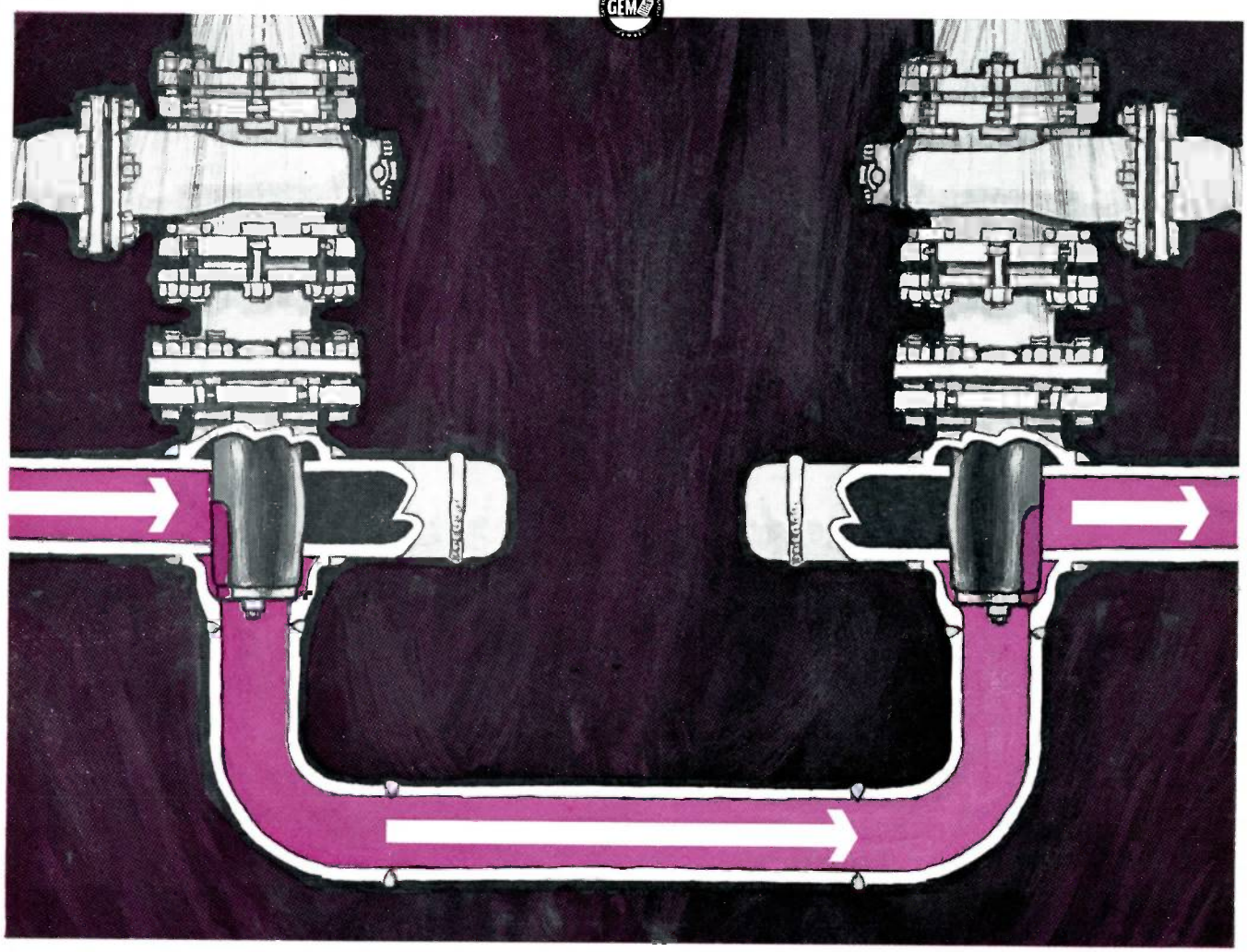

Strictly Off the Record

"So, you're not going to Paris this year?"

"No—it's London we're not going to this year; it was Paris we didn't go to last year!"

* * *

Sign language: "Placard on the rear of a house trailer on the freeway read: 'You are keeping up with Joneses'."

* * *

Asked the mother in a toy shop, "Isn't this a rather complicated toy for a small child?"

"Perhaps," replied the salesman, "but it's a perfect toy guaranteed to teach any child how to live in the world of today. No matter how he puts it together, it's wrong."

* * *

The class was discussing namesakes. Turning to one pupil, the teacher asked, "And why were you named Bill?"

"My folks really didn't have much choice," was the reply. "I came on the first of the month."

* * *

An executive dictated some difficult letters to a new stenographer. When she brought them back for signature he was horrified to read a scrambled version of his carefully worded remarks. Returning the mangled letters to the girl, he barked, "Don't you read these letters over before putting them on my desk?"

"Oh, no sir," replied the young typists, "I thought they were confidential."

* * *

A pretty young lady presented a check at a bank for cashing. The teller examined it, then asked, "Can you identify yourself?"

Looking puzzled, the girl dipped into her handbag and pulled out a small mirror.

She glanced in it for a moment and then smiled. "Yes, it's me all right."

* * *

Motorist: What will it cost to fix my car?

Mechanic: What's the matter with it?

Motorist: I don't know.

Mechanic: $39.75.

One business firm wrote to another saying: "Our electronic brain estimates that the cost of the work you wanted carried out will be . . ."

The following reply arrived the next morning: "As this is higher than we anticipated, we would suggest that your electronic brain make an appointment with ours to discuss ways of reducing the figure."

* * *

A young mother, after putting her two children to bed one night, changed into a droopy blouse and an old pair of slacks and proceeded to wash her hair. All during the shampoo she could hear the children growing wilder and noisier. Finishing as hurriedly as possible, she wrapped a large towel around her head, stormed into their room and put them back to bed with a stern warning to stay there. As she left, she heard her two-year-old say to his brother in a trembling voice: "Who was that?"

* * *

The other day a doctor cut open a patient's stomach and a bunch of butterflies flew out. "Holy cow!" exclaimed the doctor to his assistant. "He was telling the truth!"

* * *

A man asked a druggist one Sunday morning if he had change for a dime. "Sure, here you are," said the druggist, "and I hope you'll enjoy the sermon."

* * *

A Texan arrived in heaven and found things as he'd hoped. One angel took him in charge and asked if there was any particular thing he wanted. "Yep, I always liked choir music," said the Texan. "Get me 10,000 sopranos."

"An unusual request," commented the angel, "but you shall have them. Anything else?"

"Yep, 10,000 alto singers."

They were promised.

"And then 10,000 tenors," ordered the Texan, "an' that'll be all for the present."

"Well-er, how about the bassos?" inquired the angel.

"I'll sing bass."

* * *

A farmer whose elderly mother was in a nursing home brought her a fresh bottle of milk every time he visited her, always adding a little brandy to it. She never made any comment about the milk but one day when her son visited she said, "Albert, could I ask a favor?"

"Certainly, Mother," he responded.

"Please, Albert," she said, "don't ever sell that cow."

* * *

An old woman at the customs office was asked if she had anything to declare. No, nothing at all. But what was in the bottle? Oh, only holy water from Lourdes. The customs officer pulled the cork. "Whiskey, it is," said he.

"Glory be to God!" cried the offender. "A miracle."

* * *

He became very ill and was rushed to the hospital. Next day, his boss was among the first to pay a visit. "Now, Henry," he pleaded, "you just don't worry about a thing. Everyone down at the office is going to pitch in and do your work—as soon as we can figure out what you've been doing."

* * *

Two hillbillies who had never been on a train were drafted and on their way to camp. A food butcher came through the train selling bananas which neither mountaineer had ever seen. Each bought one. As one of them bit into his banana the train entered a tunnel. His voice came to his companion in the darkness. "Have you et yours yet?"

"Not yet. Why?"

"Well, don't touch it. I've et one bite and gone blind."

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