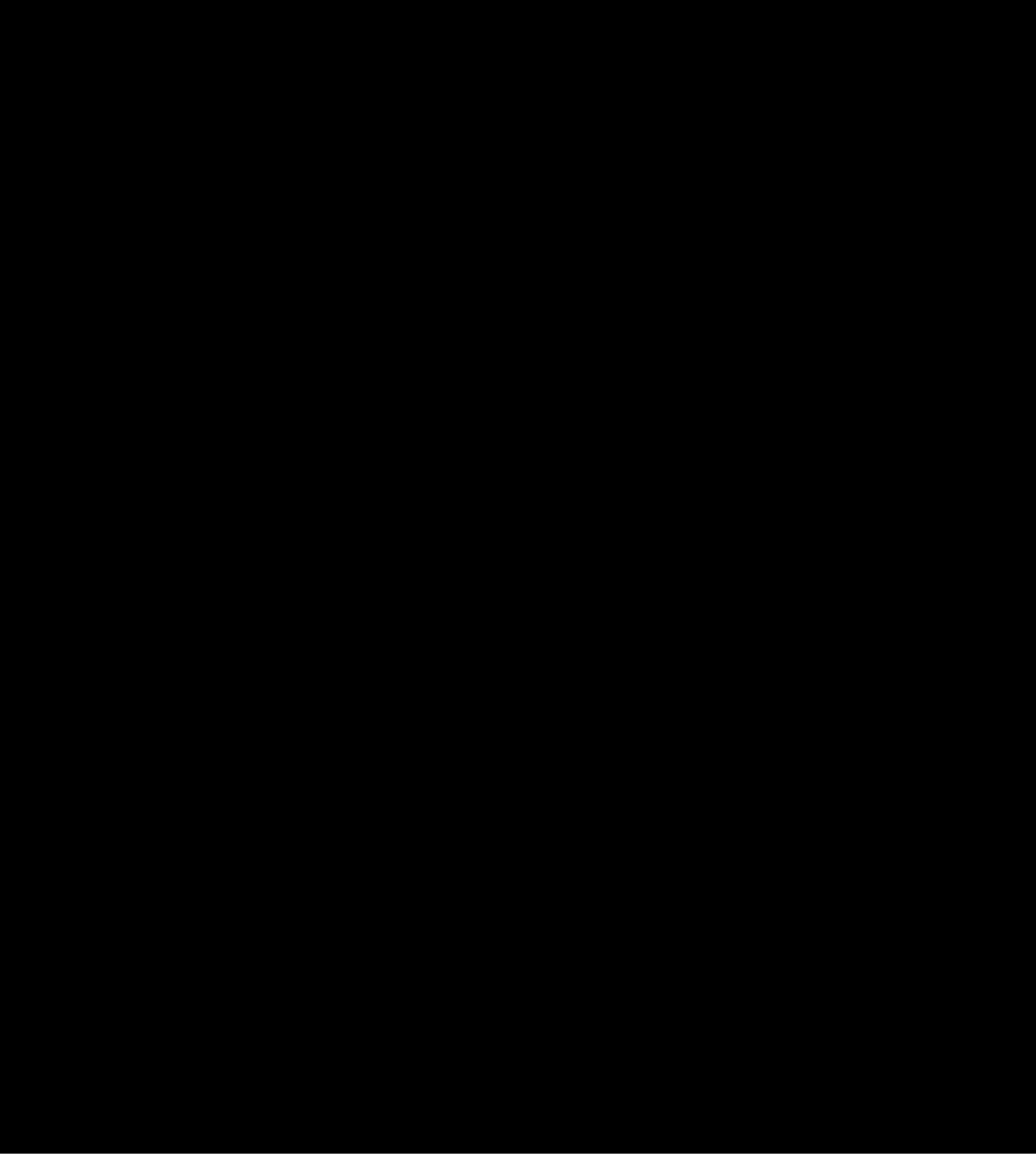




Better Paint Campaign Will Aid Painters' Business

MASTER painters and lumber dealers have a common interest since it is estimated that 90 per cent of all exterior paint is applied to wood constructed buildings. When substitutes for wood, requiring no paint, are used it destroys lumber sales and also the possibility of painting contracts.

The Forest Products-Better Paint Campaign, sponsored by the Lead Industries Association in cooperation with the American Forest Products Industries, Inc., the national association of the lumber industry, is designed to awaken lumber dealers to the necessity of good paint and good painting as a protection to lumber markets. Property owners who repeatedly suffer the trouble and expense caused by failures of low grade paint, naturally turn to other building materials requiring little or no paint. That affects the business of lumber dealer and painter alike, and both lose.

Responsible lumber mills are shipping only thoroughly dry siding and exterior finish lumber which is being distributed through the retail lumber yards, but regardless of how good or how dry the siding is, the lumberman depends on the master painter and his craftsmen to beautify and protect

Campaign designed to protect lumber markets deserves painters' support as well as lumber dealers'.

properly this lumber so it will adequately serve the home owner as an economical building material. The master painters future business depends on keeping these home owners

satisfied by using the highest quality paints. Lumbermen are awakening to the necessity of actively fostering the use of good paint and of recommending only the master painters who realize their responsibility to make the lumber consumer a satisfied customer. Since the first of this year over 6,000 lumber yards have requested information on how to avoid paint failures on different species of wood. The accompanying chart shows the intimate tie up between the 21,000 retail lumber dealers in the United States and the painter. Just as lumbermen should advocate good painting and the use of good paint, painters should advocate building with lumber and should use good paint to paint it.

The average home owner is satisfied with his new home for about 10 or 12 years. Then he wants to change the floor plan, remodel the exterior, add some rooms, bring the style up to date—there is style in home designs just as there is in clothes. Wood wall construction provides the most economical material to meet such consumer desires. It is easily altered, the material re-used and new paint all over makes a complete remodeling job at lowest cost.

Using pure white lead paint is the surest way to prevent dissatisfaction with paint and wood. White lead paint has a simple, known composition with no mystery about it, and it has been used longer and more extensively than any other competitive paint or pigment, so that its high durability and quality is an established fact. Paint maintenance is lowest when white lead is used, and that keeps home owners satisfied with wood constructed buildings, thus protecting the common market of painter and lumberman. Painters should whole-heartedly support the Forest Products-Better Paint Campaign, which will benefit their own businesses.



Showing how lumber markets had contracted even before the depression, and the painters' relation to lumber dealers.

Good Gilding Requires White Lead Undercoats

GILDING of the bronze fountain figures in the plaza at Rockefeller Center has just been accomplished by first painting the figures with two coats of white lead, turpentine and varnish before applying the size and gold leaf. Mack, Jenney & Tyler of New York, who did this exacting gilding

work, have followed this method for many years on some of the country's outstanding gilding jobs, and it is now almost universal practice. For instance, they followed the same procedure on the famous black and gold American Radiator Building in New York, gilding over copper, on the New York Life

Insurance Co. Building and the New York Central Building, also applied over copper in both cases, on the dome of the West Virginia State Capitol, applied over lead coated copper, and on the Consolidated Gas Co. Building in New York, applied over bronze.

There are several reasons for the use of the white lead coats before gilding. A better bond is provided for the gold leaf and the paint serves to fill irregularities in the surface to be covered and make a

neater finished job. As the layer of gold leaf is always extremely thin, the paint serves to protect the metal underneath, prevent discoloration if it happens to be a metal that will discolor on exposure, and thus prolong the good appearance of the work. It is also essential to use white lead before gilding over wood, plaster or other porous surfaces in order to seal the pores.

LEFT—Lead-coated copper dome of the West Virginia Capitol, gilded over white lead.



WURTS BROS.

Gilded bronze fountain figures in the sunken court of Rockefeller Center.



WURTS BROS.

Applying white lead undercoats to the bronze fountain figures, Rockefeller Center.

Peoria Code and Master Plumbers Strong for Lead

PEORIA, Illinois' second largest city and the home of many lovely residences and huge industries, operates under a truly up-to-date plumbing code adopted in October, 1931. Under this code, practically all waste and vent pipe installed in Peoria is lead. In addition, the Peoria Master Plumbers Association is a strong and active organization with the interests of the plumbing business in that city at heart. It is interesting to note that conditions in the plumbing business in Peoria are said to be well above the average. A letter received from Mr. Hugh P. Marshall, Executive Secretary of the Peoria Master Plumbers Association states that it is the intention of the Peoria members to recommend the installation of lead wherever it is possible to do so.

The Peoria plumbing code only permits materials which will give reliable service and thus protect the

city's property owners against damage, expensive repairs, and, above all, unsanitary conditions. At the same time, the general use of lead in Peoria plumbing has undoubtedly been a protection to both master and journeymen plumbers in that city by preventing unqualified workmen, who are unable to make or repair lead installations, from competing with legitimate plumbers. It has also prevented overcrowding the industry itself with an undesirable and less skilled element. The Peoria code states:

SOIL, WASTE AND VENT PIPES (What to consist of)—All soil, waste and vent pipes shall be of cast iron, lead lined pipe, lead or brass.

Since under this provision lead makes the most satisfactory and durable installation at the lowest cost, it is used for practically all waste and vent pipes.

A Noteworthy Issue of the Illinois Master Plumber

IN THE March, 1934, issue of the *Illinois Master Plumber*, attractive and informative official publication of the Illinois Master Plumbers' Association, Mr. William R. Brookman, Editor, makes the following comment in connection with the publication of a speech delivered at the Illinois Master Plumbers' convention in January on "Lead and Its Usage in Modern Plumbing."

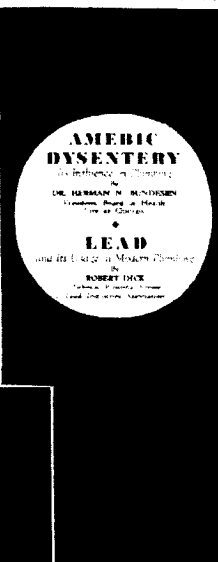
A return to more extensive use of lead in plumbing work would appear one of the best weapons the skilled profession of plumbing could have to protect against the onslaught of the common enemy, the "handy man." Lead is the foundation of the art of plumbing, only a skilled craftsman can work with lead. Lead remains the best friend of the plumber—*Editor*.

A letter is also published in the same issue from Mr. Chas. O. Neumann, Secretary, Moline Master Plumbers' Bureau, which strongly endorses the action of the Illinois convention in passing a resolution urging the greater use of lead in plumbing. This resolution was printed in full in LEAD, March, 1934. An article by Dr. Herman N. Bundesen, President, Chicago Board of Health, points out the importance of plumbing on public health and the necessity of doing everything possible to keep handymen from doing plumbing work. This is a result of the recent findings in Chicago which showed that the amebic dysentery epidemic there was due to improper plumbing where in so many cases, handymen have done the work.

Reprints of Dr. Bundesen's article and the speech about lead may be obtained from Wm. R. Brookman, Executive Secretary, Illinois Master Plumbers' Association, 23 Illinois Street, Chicago Heights, Illinois.

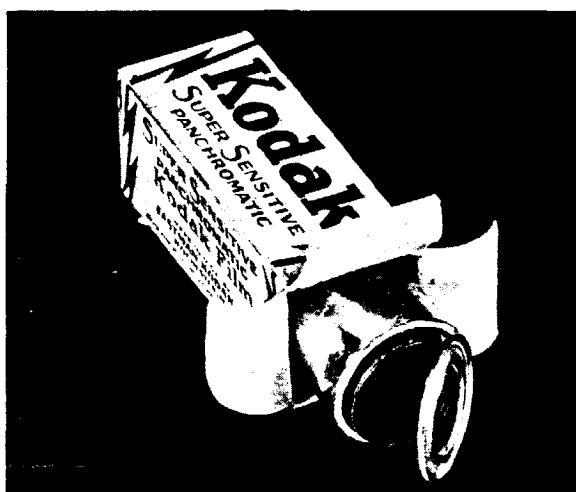
Official Publication of the Illinois Master Plumbers' Association

Vol. 19 No. 3



Mr. William R. Brookman, Executive Secretary, Illinois Master Plumbers' Association, and the magazine he edits.

Lead Container Protects Sensitive Kodak Films



Film package, showing protective lead cartridge with top open.

FOR a number of years, lead has had an important application with the Eastman Kodak Company as a packaging material for roll film. The purpose has been to protect the film against atmospheric conditions that would be detrimental to its photographic qualities. For this reason, the lead tube packing has been used primarily with film shipped to the tropics.

Film in the tropics is exposed to temperatures ranging from 78 deg. to 110 deg. F., and to relatively high humidities, which may be 80 per cent or more. This continual change in temperature produces on packages an effect that is termed "breathing." As the atmosphere cools, the air on the inside of the package contracts and draws in moisture-laden air. This moisture is absorbed by the film and packing materials so that when the temperature rises again and the air is driven out, the moisture tends to

remain. Since this cycle probably occurs every twenty-four hours, material enclosed in any ordinary wrapping becomes, in a relatively short time, saturated with moisture. To protect roll film against moisture and this "breathing" effect, the soldered lead tube method of packing was developed.

Whereas this kind of package was found necessary primarily in the tropics in the past, the introduction and great popularity of more sensitive films, such as Super Sensitive Panchromatic and Panatomic, has made it advisable to use the soldered lead tube package for such films even in the temperate zones, in order that these more sensitive films shall reach the consumer in the best possible condition.

The tubes are extruded from tin-coated lead discs on punch presses just as lead collapsible tubes for mucilage and other products are made. The tin coating is for the purpose of giving the tube a brighter appearance. After extrusion, the tubes are trimmed to length and lined with a paper tube approximately 0.020 in. thick. Later, the film cartridges are inserted and lead caps soldered on, making the tubes air- and water-tight. The soldering is done on an automatic machine that punches the lead cap from a strip of 0.0085 in. thick lead foil, fits the cap on the tube, applies the flux and completes the soldering operation. The films are then cartoned and ready for shipment.

Lead Soil Pipe Saves Trouble and Money in Remodeling

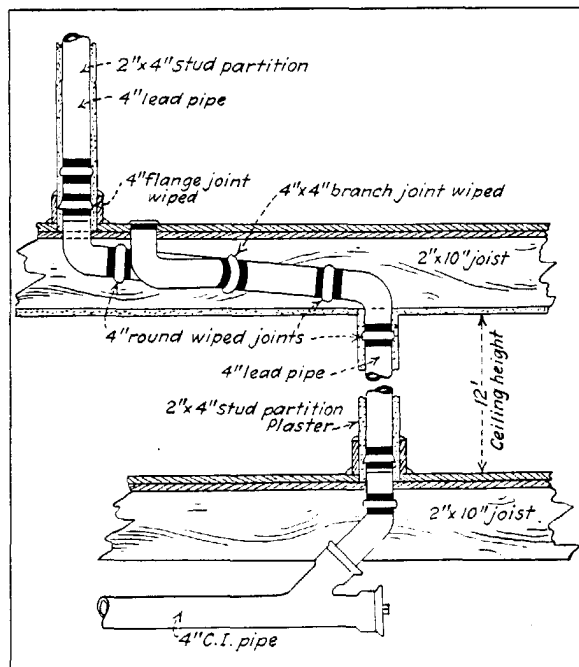
TO INSTALL an extra bathroom in an existing house and meet the owners strict requirements for not disturbing existing partitions, Mr. W. H. Vaughn, now Commissioner and Superintendent of the Water Department of Fort Smith, Arkansas, found lead soil pipe to be the only solution to his problem. This installation illustrates perfectly how lead pipe in the hands of a skilled plumber can be made to do things that would be impossible without it.

In one of the fine homes in Fort Smith, belonging to Mr. Fado Cravens, prominent attorney and son of U. S. Congressman Cravens, a new bathroom was desired on the second floor a long way from any of the existing plumbing in the house. The owner emphasized that none of the partitions or plastering was to be disturbed, making it impossible to furr out on the partition on the first floor. The partitions were 2 in. by 4 in. stud partitions.

Mr. Vaughn solved the problem by flattening 4 in. lead soil pipe just enough to slide it down between the laths of the partitions indicated on the accompanying drawing. Then by the use of lead bends and flange and round wiped joints the entire installation was made of lead pipe as shown in the drawing. The only disturbance of the existing structure that was necessary was the removal of baseboards on the first and second floor to wipe the flange joints and taking up a few floor boards on the second floor. The lead stack continues on up through the roof.

Clearly this lead pipe installation met a need that nothing else could have satisfied, and at the same time made a job that should never give the owner trouble and brought credit to Mr. Vaughn for the

skill and ingenuity shown in designing and installing it. It made a fine, durable installation that actually cost less than one made of other materials which would have required reconditioning of the existing walls, showing how effectively lead pipe can be used in remodeling work. In such a case, by using lead pipe the plumber can offer the home owner a highest quality job at lower cost with the attendant advantage of less disturbance to the owner and his property.



How lead soil pipe was installed to provide an extra bathroom without disturbing existing partitions.

Ordinance Requires Lead Water Services in Jersey City

INSTALLATION, use and maintenance of city water is regulated by ordinance in Jersey City, N. J., the ordinance calling for the extensive use of lead both for service pipes and for jointing cast iron pipe. Several pertinent sections of the ordinance are quoted here.

MATERIALS TO BE USED ON INSTALLATIONS

Section 33. All new service pipes 2 inches in diameter or less shall be of lead or galvanized lead lined.

Section 34. Service pipes larger than 2 inches in diameter shall be cast iron pipe (Class B Corporation) or galvanized lead lined.

CAULKED JOINTS

Section 41. The caulked joints for cast iron service pipes shall be made as follows:

The inner portion of the annular space between the spigot and the hub shall be first packed with clean, sound jute packing yarn, free from tar. The remaining space in the hub shall then be run full of lead at one pouring and joints shall be well caulked with proper tools and made water tight. In pouring joints sufficient metal shall be provided so that when the joint is caulked the lead shall be flush with the face of the hub. The lead used shall be of the best quality pure soft lead practically free from

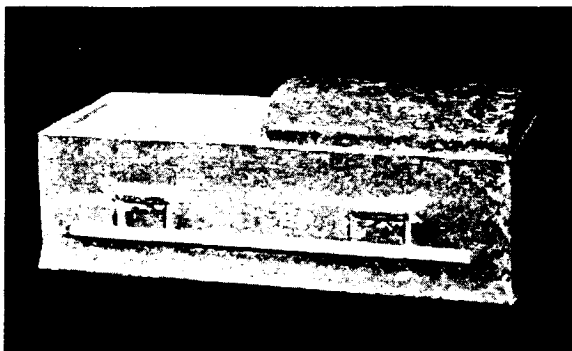
all impurities. No cold lead shall be used for caulking or filling in. The depth of lead joints up to 8-inch pipe shall be $2\frac{3}{8}$ ", and for larger pipe it shall be 3".

GOOSE NECKS

Section 46. All lead pipes shall have an excess of 3 feet of pipe formed into a goose neck at the connection to the tap and laid to the right hand, facing the tap.

As a result practically all small services in Jersey City are made of durable and flexible lead pipe. Tapping of mains is done by the Bureau of Water and services are installed by licensed plumbers. The ordinance also requires that all joints in lead pipe be wiped solder joints, making the entire installation from main to meter a plumber's job and a durable job both as to pipe and bonded joints which cannot vibrate or pull loose. The provision of the goose-neck bent right into the flexible lead pipe as a part of it without additional joints assures freedom from damage due to subsidence. Lead joints in cast iron pipe provide flexibility necessary to prevent damage to pipe or joints due to settlement and permit of ready repair by simple caulking without interruption to service. The Bureau of Water is well satisfied with the use of time-tried lead and Jersey City plumbers benefit by making the installations.

New Type Grave Vault Utilizes Durable Lead Sheath



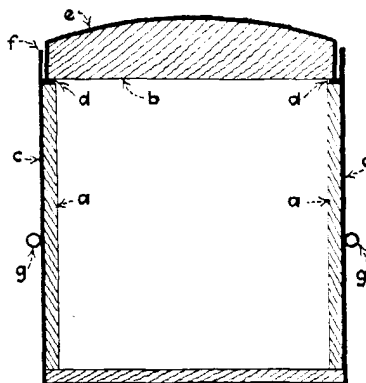
Model of the new lead-sheathed McArthur grave vault.

TAKING advantage of the known great durability of lead, a grave vault has recently been developed by Mr. H. I. McArthur of Atlanta, Ga., which is finding great favor among undertakers who have seen it. The McArthur Grave Vault is a sealed protective enclosure for caskets.

It consists of an interior form or box (a, in sketch on next page) of any desirable material like marble, composition or wood. Sheet lead (c) is mounted on the outside of this form with a lead strap (d) burned to it and nailed to the form (a). The cover plate or lid (b) is made in the same way, with the lead (e) so arranged that the lead on the sides (c) may be folded to meet that on the lid (e) at point (f), and the seam then joined by lead "burning" or welding. All other seams in the lead covering are "burned," making an entirely homogeneous lead container with joints as strong and durable as any other part of the vault. Lead handle hangers (g) "burned" to the lead jacket (c) are provided. Any desired thickness of lead may be used to construct this vault, and it has been found that 5 lb. lead is practical for the ordinary funeral the cost of which runs around \$500.

The marketing plan is based on the fact that an experienced lead "burner" is necessary to seal the vault. The vault will therefore be distributed by district agents or representatives who will manufacture, deliver and seal the vault. Undertakers will be furnished with models, make the sale and notify the agent, who will deliver and seal the vault after the casket is placed in it.

This type of vault should be ex-



Cross section of McArthur grave vault.

tremely serviceable due to lead's great durability when buried in the ground. Lead was popular for caskets centuries ago and in LEAD, September, 1932, a Syrian lead casket 1800 years old was pictured. Many famous figures of history have been laid to rest in lead caskets, including King Richard II and the Black Prince. Richard Coeur de Lion's heart was kept in a leaden heart casket for many years.

All Doors Sound-Proofed with Lead in N.B.C. Studios



Detail of sound-proof door with edges of lead sheets visible.

ALL studio doors in the up-to-the-minute new quarters of the National Broadcasting Co. in Rockefeller Center, New York, are lead-lined sound-proof doors. For broadcasting studios, music studios, laboratories and other places where sound-proofing of the highest order is required, lead-lined doors furnish the solution.

The doors in the National Broadcasting Co. studios are 3 in. thick. They are laminated wood and lead, there being three layers of white pine and two layers of 4 lb. (1/16 in. thick) sheet lead. The doors are finished with mahogany veneer. There are 112 doors of this type, averaging 3 ft. by 6 ft. 10 in. in size. At the bottom of each door are double automatic felt bottom closers operated by a plunger; and at sides and top the doors close against double rubber gaskets. In this way sound is prevented from passing through the cracks around the edges of the doors.

These doors are known as Trimount "Ideal" doors, manufactured by the Compound and Pyrono Door Co. of St. Joseph, Mich. They have an average attenuation of 39.85 decibels.

It has been conclusively demonstrated both in the laboratory and in practice that, other factors being equal, mass is the controlling factor in sound transmission, that is, the greater the mass of a door or wall, the less sound will pass through it. (See LEAD, March, 1933). Since lead provides the greatest mass in the smallest space it makes an ideal sound-proof-

ing material. In addition, lead has another advantage which increases its effect in reducing sound transmission. Lead is highly inelastic which prevents sound waves striking it from setting up vibrations on in the form of sound on the other side. In this respect it differs from other common building materials and is more like a plastic substance. It is common knowledge that, unlike other metals, lead does not ring when struck.

These two characteristics, high specific gravity and low elasticity, account for the extraordinary efficiency of lead as a sound-proofing material. In recent years the use of lead for sound- and vibration-proofing has expanded rapidly. In building foundations, under heavy machinery, in doors and walls, in pipe line hangers, on gears and car wheels and other places where the reduction of sound and vibration are important, lead has found a place.



Lead-lined sound-proof doors, N.B.C. Studios, Radio City.

Plumbers of Two More States Act to Use More Lead



Mr. JOHN P. MCCOY
of Fond du Lac, President,
Wisconsin Master Plumbers'
Association.

resolution, which was presented by Mr. George Reeke of Green Bay:

RESOLUTION

RECOMMENDING THE GREATER USE OF LEAD

ADOPTED BY

THE FORTIETH ANNUAL CONVENTION
OF THE

WISCONSIN MASTER PLUMBERS' ASSOCIATION

MILWAUKEE, WISCONSIN

JANUARY 24, 1934

WHEREAS, through the introduction of inferior devices in the plumbing field, much trouble and expense has in late years been absorbed by property owners in defective waste and water supplies which can readily be eliminated by the

use of lead service installations and waste installations which are considered superior to other methods:

THEREFORE BE IT RESOLVED, that the Wisconsin Master Plumbers' Association recommend to its members the greater use of lead products with round and hand wiped joints, wherever our experience determines that by its use we consider the mechanical installations serve the best interests of our clientele.

Among the many far-sighted members who actively supported this resolution were Mr. Henry



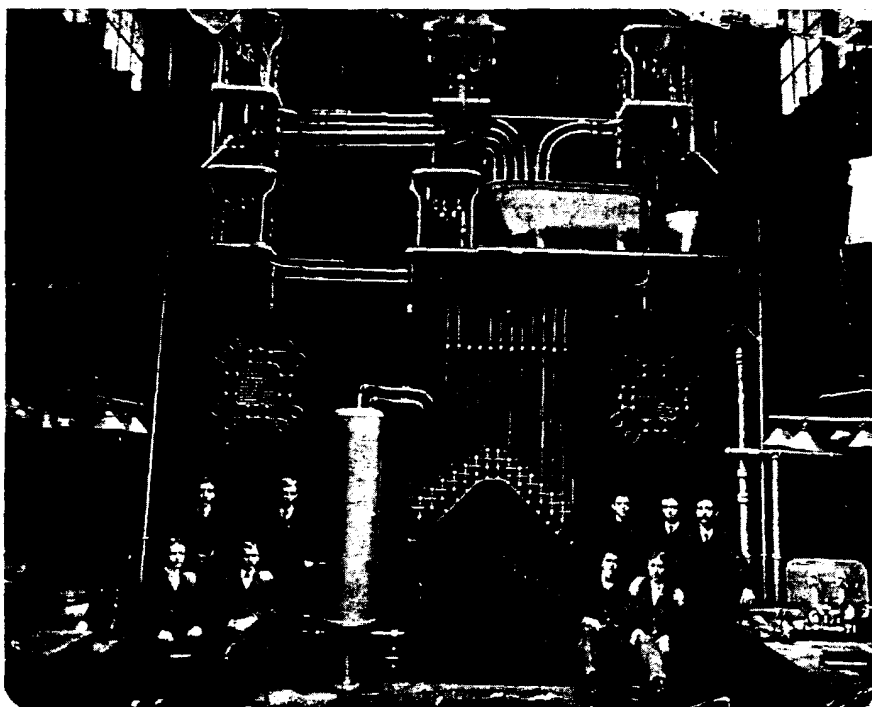
At the Wisconsin Convention, left to right: Mr. Otto Waskow of Milwaukee, Mr. F. C. Kuitemeyer of Milwaukee, Chairman of the Resolutions Committee, Mr. John P. McCoy of Fond du Lac, State President, and Mr. H. C. Weber, President of the Milwaukee Assoc.

C. Weber, President of the Milwaukee Master Plumbers' Association and Mr. John P. McCoy of Fond du Lac, President of the State Association.

The Ohio State Association of Master Plumbers met for its annual convention at Toledo, early in February, and some most informative and helpful business sessions resulted. A resolution sponsored by Mr. Edward Frank of Cincinnati which like-

wise urges plumbers to make greater use of lead in plumbing installations was adopted. Space does not permit publication of the complete resolution in this issue, but it will probably be printed in full in an early issue of LEAD.

Plumbers realize that the use of cheap materials works a hardship on property owners in the long run and creates ill will toward the plumbing business. At the same time these cheap materials, as a rule, require little skill to install or repair, lowering the quality of workmanship among plumbers and allowing many people not even engaged in the plumbing business to do much of the work.



An old photograph of the New York Trade School in 1901, showing a typical residence installation of the period and other lead work. Mr. McCoy stands at the range boiler.

THE LEAD INDUSTRIES ASSOCIATION INVITES INQUIRIES ON ANY SUBJECT RELATING TO LEAD AND WILL BE GLAD TO COOPERATE WITHOUT OBLIGATION IN THE SOLUTION OF YOUR LEAD PROBLEMS

LIA25279