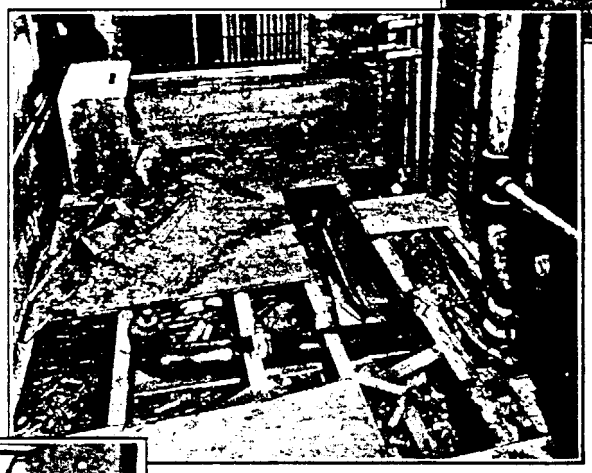
A Fine Bathroom Remodeling Job with the Aid of Lead

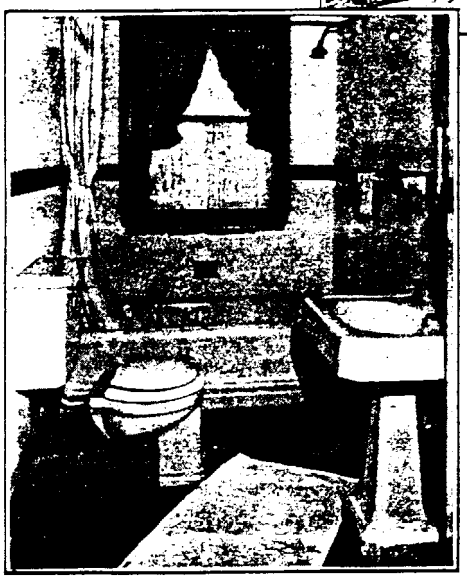
THESE three photographs tell more clearly than words a story of modern plumbing accomplishment in which lead pipe and a skilled plumber play important parts. A building at 54 De Hart Place, Elizabeth, N. J., was damaged by fire. The result to the bathroom is shown in the first picture, as well as the old fashioned plumbing fixtures used. Mr. George L. Bird, prominent Elizabeth plumbing contractor and formerly President of the New Jersey State Master Plumbers Association, was called in to do what he could to repair the damage.

Bathroom damaged by fire. Note old-fashioned fixtures.

The second picture shows the new roughing-in installed by Mr. Bird. Relocation of the water closet necessitated a fairly long run of 4 in. waste pipe. This is made of lead wiped to a 4 in. lead bend. The bath tub waste and trap are also of lead. All joints, naturally, are wiped. The installation thus made is in accordance with the Elizabeth plumbing code and was approved by Mr. Luke J. Devine, plumbing inspector.



Mr. Bird insists on the use of the lead for concealed work because he knows it will make the best job for his customers. It will not clog with rust or waste material. The wiped joints are smooth inside and offer no obstruction to flow either of water or solids. Settlement will not damage lead work because of its flexibility and neither settlement nor vibration will cause wiped joints to shake loose because they are bonded, making one continuous piece of pipe of the sections joined.



Lead roughing-in for remodeling of same bathroom.

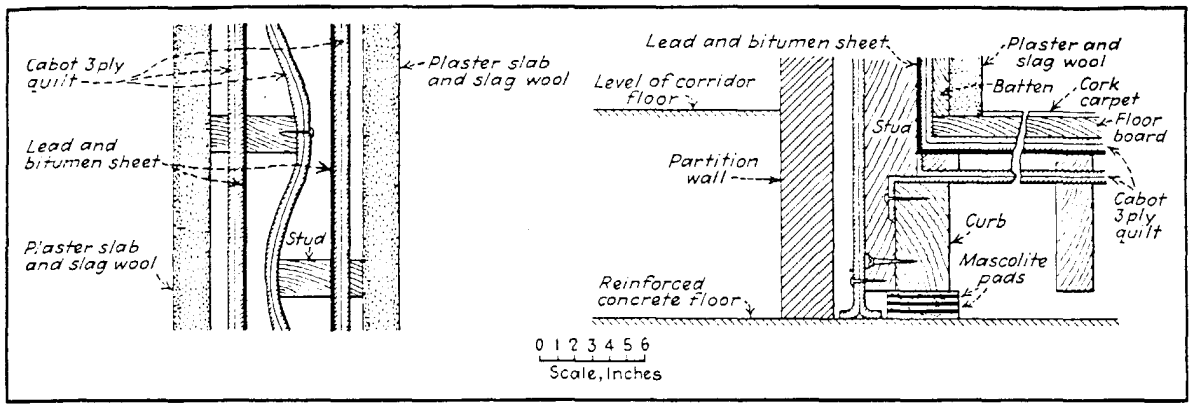
The same bathroom with remodeling completed.

Photos by John J. McCutcheon

If alterations or repairs to this job are ever needed in the future, a real plumber will have to be called in. No one but a real plumber can handle lead work. Furthermore, no one but a real plumber, one who has spent much time and effort to learn his trade, would have been able to make this installation in the first place. That is another reason Mr. Bird advocates lead work. He knows it to be a natural protection to legitimate plumbers who in turn must protect the health and property of the uninformed public.

The last photograph shows the finished bathroom. Certainly this job, in which the concealed plumbing is of the highest quality and the visible room and fixtures so attractive, reflects credit on the plumber and builds up good will for him that is of inestimable value. The entire plumbing industry benefits by this sort of work.

Lead Effective As Soundproofing In England and France

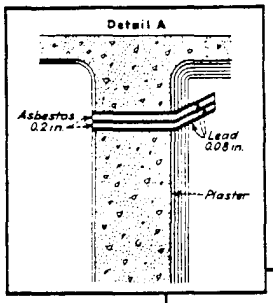


After Davis and Kaye, "The Acoustics of Buildings"

Details of soundproof wall and floor construction, Music School, St. Paul's Girls' School, Hammersmith, England.

TWO interesting descriptions of lead soundproofing have come from Europe, one installation being in England and the other in France. Both are said to be highly satisfactory in the results obtained.

At Hammersmith, England, the Music School of St. Paul's Girls' School consists of a large hall for singing, two large chamber music rooms and nine or ten practice rooms for piano and violin. The practice rooms, which are on the top floor, are said to be so well insulated that no sound can be heard either through the partitions or floor.

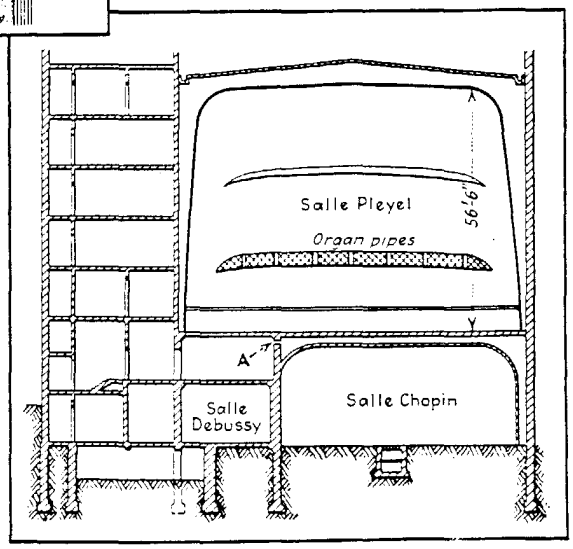


As shown in the drawing, each room is practically an insulated box surrounded by two layers of Cabot's quilt and lead and bitumen sheet. Sleepers insulated from the joists by layers of quilt support the floor. The joists themselves are insulated from the concrete floor by means of Mascolite pads. Walls are finished in plaster on slag wool backing, and some nails were insulated with rubber. Double doors and windows were used.

Forced ventilation is employed, the ducts being arranged to prevent transmission of sound. To accomplish this, inlet and outlet ventilators were constructed with baffles made of felt and perforated lead.

Study of the other accompanying sketches reveals the method employed in the Salle Pleyel, Paris. It is seen that the floor of the Salle Pleyel is supported on the wall separating the Salle Debussy and Salle Chopin. Obviously sound in any of these rooms would be readily transmitted to the others unless special precautions were taken. Therefore, a pad composed of alternate layers of lead and asbestos, three of lead 0.08 in. thick and two of asbestos 0.2 in. thick, was inserted around the wall near its top. This effectively cuts off transmission of sound at this point and the pad has enough strength to support the structure above, which is unusual in soundproofing materials.

The great mass of lead, low elasticity and high reflection of sound striking it, make lead extremely suitable for this purpose. It is particularly advantageous because much thinner sheets of lead, requiring less space than other materials, can be used to get the desired effect.



Method of preventing sound transmission up through a supporting wall in France.

Lead Joints In High Pressure Main

SAN FRANCISCO, California, is expending $2,500,000 under the P.W.A. to extend its water distribution system and to replace inadequate mains in part of the San Francisco area. It is reported that 129 miles of pipe are to be laid in the distributing system. This includes removal of about 80 miles of existing 2 in. lines, insufficient for present requirements, and its replacement with 6 and 8 in. pipe.

The accompanying photograph shows a high pressure fire line, 12 in. in diameter, consisting of cast iron pipe, hand calked with lead, for a length of 6500 ft., and which has replaced a much smaller line. The photograph shows a gage reading exactly 450 lb. pressure.

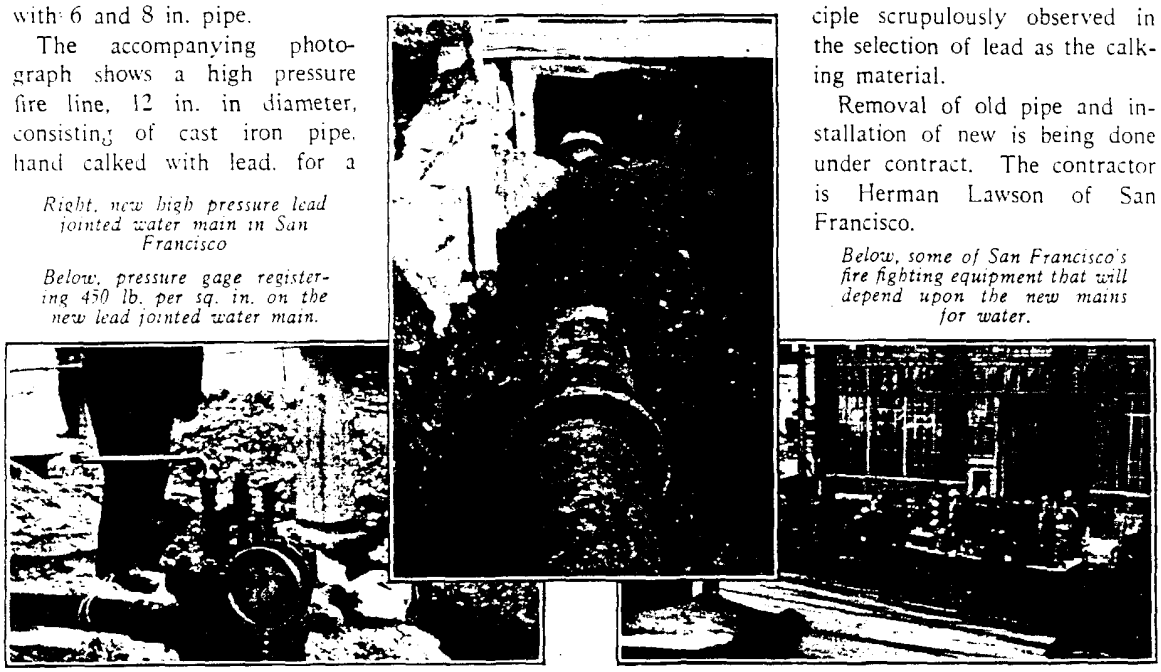
By using lead the Water Department is assured of a calking material which will last as long as the line itself. It is poor economy to use anything but the best material in a construction program as important as a fire line—a principle scrupulously observed in the selection of lead as the calking material.

Removal of old pipe and installation of new is being done under contract. The contractor is Herman Lawson of San Francisco.

Right, new high pressure lead jointed water main in San Francisco

Below, pressure gage registering 450 lb. per sq. in. on the new lead jointed water main.

Below, some of San Francisco's fire fighting equipment that will depend upon the new mains for water.



Value of Lead Recognized By More Plumbers' Associations

GOOD plumbers take much pride in the things their skill enables them to do with lead. A fine example of craftsmanship is the bust illustrated here, which was beaten up from sheet lead by Mr. H. G. Wilson, of Louisville, Ky., who, in addition to conducting a plumbing and heating business, is instructor in the Theodore Ahrens Trade School in that city. The bust is of Mr. Ahrens.

Plumbers may wonder what work such as this has to do with the plumbing business. It simply exemplifies that type of craftsmanship of which real plumbers are genuinely proud. Men who have taken the time and trouble to learn to work like this can generally be relied upon to do painstaking skillful work whatever it may be. That is the type of man essential to the plumbing business, particularly at present when there is a tendency to break down the craftsmanship of the plumbing trade and make it possible for handymen to do plumbing work.

More and more plumbers now realize this and are putting up a fight to preserve the craftsmanship of their business. Master plumbers' state associations in Massachusetts, West Virginia and Kentucky, at their annual conventions in April and May, added their names to the long list of plumbers' organizations which are actively encouraging greater employment of lead work in plumbing. These states adopted strong resolutions advocating more lead roughing-in and water services. Their resolutions were similar to others that have been printed in

LEAD from time to time and as adopted by nine other states that have taken such action. Master plumbers associations in twelve states representing nearly half the population of the entire country have now adopted such resolutions.

The subject of lead plumbing was brought up on the floor of the New Jersey Master Plumbers Association's highly successful convention in May. New Jersey was the first state to adopt a resolution urging its members to work for more lead in plumbing installations. That was done two years ago and has given sufficient time for the New Jersey Association to study the effects of its action. That results were highly pleasing and that these efforts should be continued was well brought out in a speech which received enthusiastic applause. Members were urged to continue their activities in their own communities to bring about better conditions for both public and plumber by demanding the requirement of more lead roughing-in and water services by local plumbing codes.

Mr. H. G. Wilson of Louisville and the bust he formed from sheet lead.

At the Pennsylvania Master Plumbers' Convention it was also reported that a similar resolution passed last year had not been lost sight of, several communities reporting new and more satisfactory codes requiring more lead work and others reporting stricter enforcement of existing ordinances.

Improved conditions for plumbers and public will result from these activities in many states.

Strict Plumbing Code Enforcement Benefits Allentown

ALLENTOWN, PA., through its enterprising plumbing inspector, Mr. Harvey F. Saeger, intends to see that its plumbing laws are enforced, as the following article from the Allentown Chronicle and News and Evening Item, of May 15, 1935, indicates:

PLUMBERS CODE VIOLATORS ARE WARNED.

Fines Levied on Two Yesterday as 'Lesson To Others'.

City plumbing inspector Harvey F. Saeger today served warning on local plumbers that future violators of a section of the city plumbing code about which there has been considerable complaint, may expect to be hailed into police court and fined.

Two local plumbers were brought into police court yesterday by Mr. Saeger and fined by Alderman William F. Bower for a violation of the ordinance. Other plumbers, Mr. Saeger said, have been guilty of similar violations and the fine imposed on the two plumbers arrested should serve as a warning to others, he declared.

The particular section of the code, about which the complaints have been received concerns, "joints for soil and waste pipes."

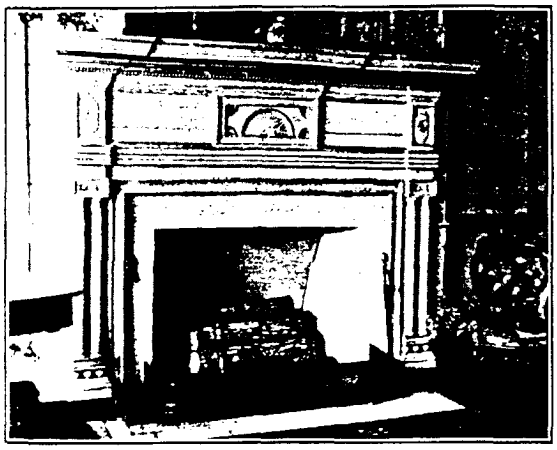
"Connections of lead and cast iron pipes must be made with brass sleeve or ferrule of the same size as the lead pipe inserted in the hub of the iron pipe and calked with lead. The lead pipe must be attached to the ferrule by wiped joint. Joints between lead and wrought iron pipes must be made with brass nipple of same size as lead pipe. The lead pipe must be attached to the nipple by wiped joint. All connections of lead waste pipe must be made by means of wiped joint," according to the ordinance.

This portion of the code was recently given to every local plumber with the notice that the specifications were to be carried out to the letter.

Good plumbing laws are essential but they are of little use unless strictly enforced. It should be the duty of every right thinking plumber not only to see that his community has a satisfactory plumbing code, but to see that that code is made fully effective. Allentown is a good example of what many another progressive city is doing along these lines.

White Lead Performs Remarkably On Century-Old Landmark

Interior and Exterior Always Painted with Pure White Lead



Beautiful hand carved mantel at Willow Wall. So far as the owner knows it still has the original pure white lead paint after 120 years.

Reception hall at Willow Wall, woodwork painted with pure white lead. Note original furniture and wall-paper.

WILLOW WALL is the century-old home of Mrs. A. R. McNeill, at Oldfields, Moorefield, W. Va., on the south branch of the Potomac River. Since it was erected in 1815, all the exterior trim and interior woodwork of this historic estate has been protected by pure white lead paint. Fortunately the ample protection afforded by white lead has helped to preserve a fine example of Colonial architecture and wood carving.

In the 37 rooms and halls of Willow Wall, which is now and always has been a private residence, there are 16 beautiful hand carved mantels and all the doors are embellished with hand carved trim. All this has been painted with white lead for 120 years. Mrs. McNeill has resided at Willow Wall for 53 years and states that the interior has not been repainted in that time, yet it shows no discoloration and is in fine condition. The exterior was last painted 12 years ago. In all the 120 years of its life no exterior wood has had to be replaced, even to the wood gutters. The cost of painting this old home must have been extremely low on a yearly basis over its 120 years of existence in contrast to the high cost of using low grade paint.

Exterior of Willow Wall in West Virginia, built in 1815. It has always been painted with pure white lead inside and out, the last exterior painting being done 12 years ago.

Original wall paper imported from England still adorns the main hall and is in excellent condition today. It is hand painted in 14 colors, depicting English hunting scenes. Original carpets and furniture grace this fine example of early American architecture.

Colonial builders "builded better than they knew," it is said. With but one generally used white paint pigment to choose, they were able to protect and to beautify their buildings as well as in modern times. This pigment was white lead which is today as durable and as inexpensive to apply as it was in Colonial times. White lead has thus proved its worth over many generations. It can be used without any speculation as to its performance. With all the years that white lead has been "through the mill" it remains the preferred paint today of those who know paint, such as skilled master painters, trained architects and large buyers of paint.

Lumber Mills Enclose Painting Instructions With Siding

IN AN attempt to educate the public to good painting and thus reduce paint failures on wood, most lumber manufacturers are now enclosing a painting instruction folder in each bundle of siding they ship. Paint failures on wood have hurt markets for lumber and paint and, naturally, the painters business also, by encouraging building with materials that do not require paint.

After extended studies of the problem, the California Redwood Association, the Western Pine Association, and Western Red Cedar Lumber, whose members manufacture probably 85 per cent of the siding used in this country, each compiled a set of painting instructions suitable for their particular products. These they have printed in attractive, colorful folders bearing the names of the Associations, and their members are now enclosing the proper folder with each bundle of siding.

These instructions cover painting fully. They advise correct flashing over windows and doors and end sealing of exterior lumber with paint, both precautions to prevent paint failures that result when moisture gets into or behind siding. They advise as to the best weather for painting and give other pointers on application of paint. They recommend that painting be done by skilled painters.

They also recommend painting only with pure white lead or the highest quality mixed paints and give mixing instructions.

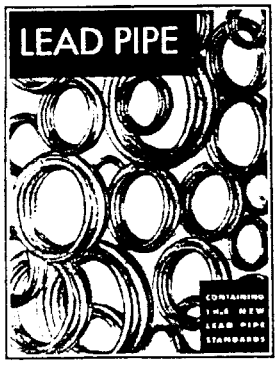
These painting instructions are a decided step forward in avoiding paint troubles, but they can only enjoy full effectiveness if every one concerned cooperates in their use.

It is the duty of the retail lumber dealer to call the attention of his customers to the instruction folders and to urge that they be followed. The carpenter and builder should cooperate in seeing that proper flashings and other construction details are attended to. The reliable painter will, of course, apply good paint properly if left to decide for himself,* but if the building owner insists on using inferior products, the painter can use the instruction folder to convince the owner of the wisdom of using good paint. The reputable painter can also use the folder to protect him before the owner when he is bidding on the job against painters who bid on low quality paints.

* Eighty-five per cent of master painters paint their own property with pure white lead paint.

Covers of painting instruction folders now enclosed in siding bundles by members of California Redwood Association, Western Red Cedar Lumber, and Western Pine Association.

Write for New Edition of Valuable Lead Pipe Booklet



A new and improved edition of the booklet "Lead Pipe," which was so well received a few years ago that the original printing was quickly exhausted, is now ready for distribution. Copies will be sent free to architects, water works engineers, builders, plumbers and other interested parties making requests to the Lead Industries Association. It contains complete information about the manufacture of lead pipe, kinds available, where to use it and suggestions about how to get the best results with lead pipe. It also contains information on lead "burning" and chemical equipment, and new sections dealing with certain uses of sheet lead have been added. Tables of the new standards of lead pipe sizes and weights and other useful data are included. Write for your copy promptly to be sure you get one.

New Type Bearings Depend On High Lead Content

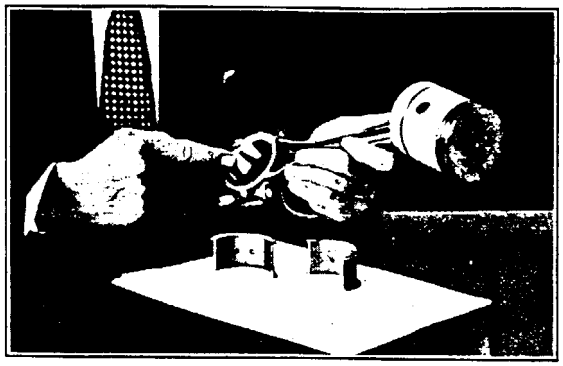
NEW bearing metals, in which lead is a much larger constituent than formerly, have been developed recently to meet the more exacting demands of modern engineering. These new alloys are mainly of two types—calcium-lead base alloys containing fractional percentages of other elements, and copper-lead alloys with the lead content running up to about 45 per cent.

The first type, the calcium-lead base alloy, has been used by railroads for truck and trailer brasses, car journal bearings, lateral plates for engine trucks, trailer and driving boxes, cross-head gibs and other applications. It is also employed in Diesel engines built for the Navy.

Perhaps the most spectacular use of this new calcium-lead base bearing has been in the Diesel powered streamline trains which have become so popular and which have established such enviable performance records. One of these on which a calcium-lead base alloy was used for all main and connecting rod bearings in the Diesel engine is the now famous M 10001 of the Union Pacific Railroad.

This type of alloy is characterized by a low coefficient of friction, and, since the melting point is higher and the metal is harder at running temperatures than older types of bearing metal, it is able to stand up under higher temperatures and pressures.

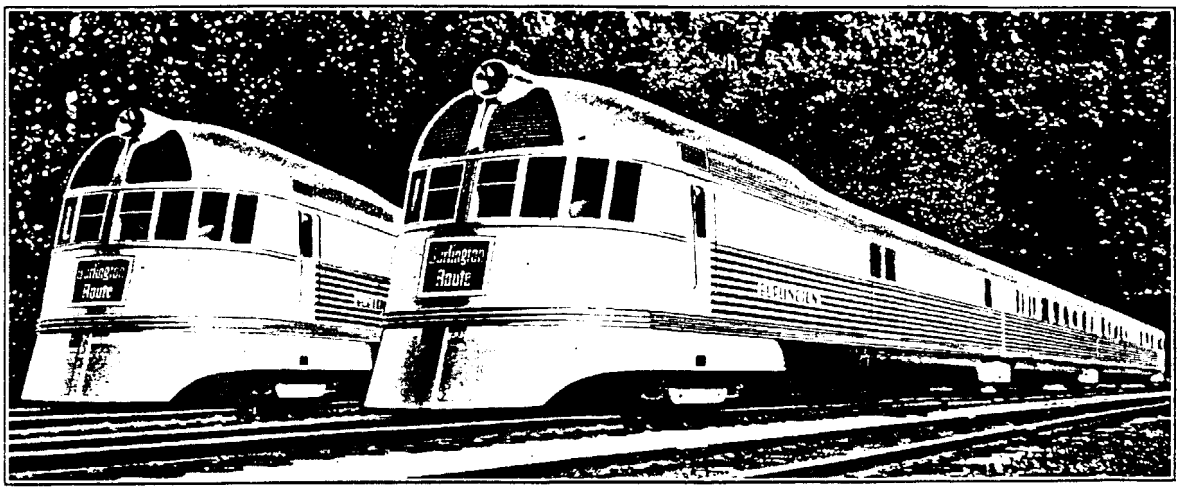
The other type of new bearing alloy—copper with large quantities of lead—has been in use for a number of years in aircraft engines. New designs in automobile motors placing harder service on bearings has led to its adoption by some of the leading motor car manufacturers like Ford and Packard. This alloy also permits higher bearing loads.



COURTESY A. C. SPARK PLUG CO.

High lead content bronze, steel backed bearings used in some of the latest and most popular automobiles.

Bearing metals able to stand higher loads and temperatures permit increased engine speeds, increased horsepower without larger engine sizes, shorter engines by using narrower bearings, multiple cylinder in-line engines in low priced cars without appreciably lengthening the wheelbase and other improvements. Also the new alloys in which lead, an American product, plays such an important part relieves American manufacturers of dependence upon foreign sources of supply.



COURTESY RAILWAY AGE.

The Burlington Route's Zephyr Twins, two of the new streamline trains whose Diesel engines use calcium-lead base bearings.

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