

LEAD

*Published by
Lead Industries
Association*

VOLUME ELEVEN

SEPTEMBER, 1941

NUMBER FIVE



The Boys Town Choir in beautiful Dowd Memorial Chapel which is decorated inside and out with white lead paint

420 Lexington Ave. **Lead Industries Association** New York, N. Y.

Renowned Boys Town, Nebraska Features Pure White Lead Paint

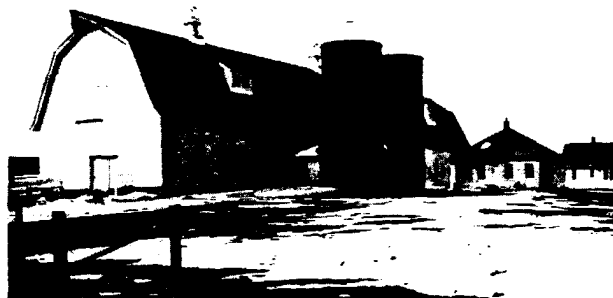
It is rare when it can be said that an entire town and every building in it has been painted with pure white lead and oil. Such, however, is the case at Boys Town, Nebraska, famous village created by Father Flanagan for homeless, abandoned boys. From dairy barns to apartment buildings and from dining hall to post office, all Boys Town building exteriors are painted in accordance with a long and successfully established pure white lead maintenance program.



Interior of beautiful Dowd Memorial Chapel is white lead tinted gray

Because of the increasing number of applications for admission Father Flanagan received, it became necessary for him to carry out a large expansion program at Boys Town. Four apartment buildings, a dining hall and an infirmary are among the new additions. Most highly praised of the new buildings is the magnificent Dowd Memorial Chapel. Leo A. Daly was the architect on this beautiful building as well as all the other buildings built in the last ten years. Although painted with white lead on the exterior, the chapel is, however, more noteworthy for the beautiful pure white lead decoration of interior walls. Father Flanagan wanted only the best of ma-

The durability of white lead keeps farm maintenance at a minimum at Boys Town



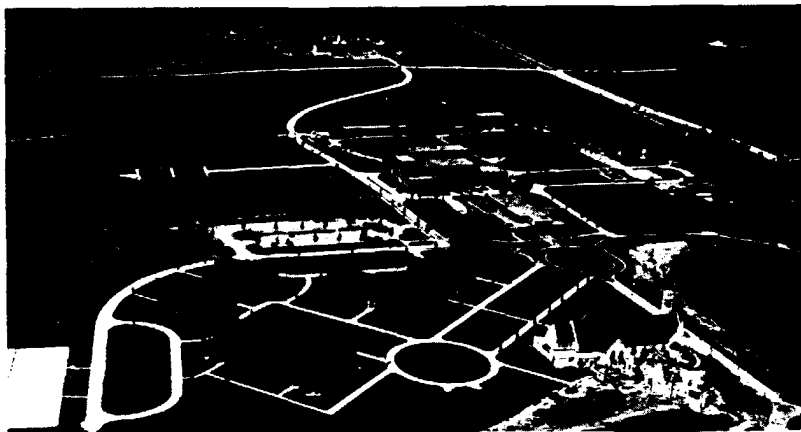
terials to go into the Dowd Memorial and yet, at the same time, care had to be exercised to see that no unnecessary extravagance was committed. Pure white lead paint proved to be the perfect solution.

It was desired that the walls of the Chapel be made as inconspicuous as possible. By using pure white lead and oil and tinting the paint to just the correct shade of neutral gray, the desired effect was easily obtained. The last coat was stippled to give the impression of a natural sand-finished wall but providing the advantages of a completely washable white lead surface. The painting of the beautiful Dowd Memorial Chapel as well as all the new and maintenance painting at the Home during the last 15 years has been ably carried out by the G. A. Steinheimer Company, contracting painters of Omaha, Nebraska. Mr. Steinheimer established the G. A. Steinheimer Company 25 years ago and is a present member of the National Executive Board of the Painting

and Decorating Contractors of America.

Boys Town specifies pure white lead paint year after year. The qualities of reliability and economy inherent in pure white lead paint are particularly complimentary to the aims of Father Flanagan's Home. Because Boys Town is wholly supported by contributions from friends, economy is paramount. At the same time, it is equally important that materials of proved worth and well established reliability be used. Pure white lead paint more than adequately fulfills these requirements.

Large buyers of paint find in white lead a number of advantages in addition to the quality of the job it produces. Among these is the high degree of standardization, simplifying the purchasing procedure with the full knowledge of obtaining a product of uniform good quality. Likewise the number of items to be purchased and stocked to satisfy all painting requirements is reduced when white lead is used.



Aerial view of Boys Town showing the extensive plant developed through the initiative of Father Flanagan. Dormitories and class buildings alike are all painted inside and out with pure white lead

Commercial Standards for Calking Lead, Lead Pipe and Fittings

THE United States Department of Commerce, through the National Bureau of Standards, recently announced adoption of Commercial Standards for calking lead, lead pipe, and lead traps and bends. These standards are designated CS94-41, CS95-41, and CS96-41, respectively, and became effective June 25, 1941. They are identical in substance with the Lead Industries Association Standards for the same products. A copy of the Bureau's announcement follows:

U. S. DEPARTMENT OF COMMERCE
National Bureau of Standards
WASHINGTON

June 10, 1941

To the Producers, Distributors, and
Users of Lead Products.

GENTLEMEN:

Following circulation of proposed drafts to leading distributor and user organizations for comment, and subsequent to adjustments

to suit the composite recommendations, the recommended commercial standards for calking lead, lead pipe, and lead traps and bends were circulated on April 23, 1941, for written acceptance.

Since that time we have received signed acceptances from a number of producers, distributors, and users, estimated to represent a satisfactory majority.

We are pleased, therefore, in the absence of active opposition, to announce that the commercial standards, which are identified as Calking Lead, CS94-41, Lead Pipe, CS95-41, and Lead Traps and Bends, CS96-41, may be considered effective from June 25, 1941.

One mimeographed copy of each of the accepted standards is enclosed and, as soon as printed copies become available, we shall be pleased to forward one to each acceptor of record.

Printed copies will be mailed to non-acceptors only on specific request.

Very truly yours,

F. W. REYNOLDS (Signed)
Division of Trade Standards

This action by the Bureau of Standards and acceptance by producers, distributors and users of lead products places one more stamp of approval on the principles embodied in the Standards of the Lead Industries Association, promulgated several years ago and, in the case of traps and bends, revised as of January 1, 1941. It is further evidence of the great desirability of using only products that come up to some definite quality standard. An easy way to be sure of getting lead products which adhere to the L. I. A. Standards (identical in substance with the new Commercial Standards) is to be sure that the Lead Industries' Seal of Approval is stamped on them.

The Lead Industries Association will be glad to supply printed copies of the new Commercial Standards to those interested as soon as they have been printed by the Government Printing Office.

SPECIFY **SEAL OF LEAD INDUSTRIES' MATERIAL APPROVAL**

Modern Lead Burial Vaults Have Traditional Background

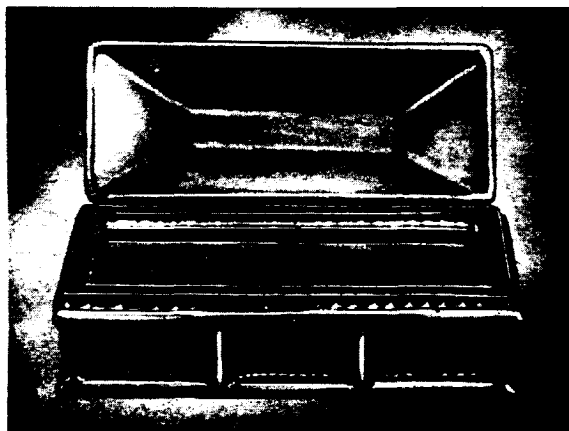
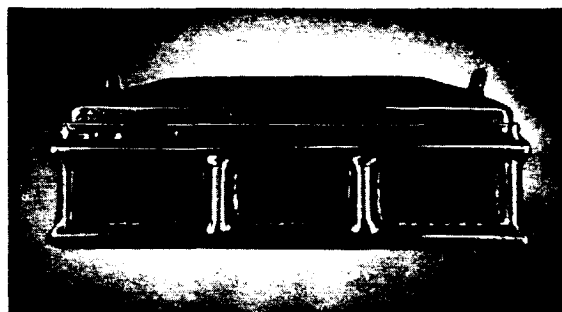
THE great durability of lead has resulted in its use as the last resting place of many of the most famous characters of history. Thus the Black Prince, Richard II, Christopher Columbus, John Paul Jones are among those who were buried in lead caskets, and Richard Cœur de Lion's heart was for many years kept in a leaden casket at Rouen.

Recently a new burial vault made of lead has been placed on the market. Not only does lead have the advantage

of extreme durability and resistance to soil corrosion, but a lead vault may easily be hermetically sealed, the exclusion of air preserving the contents. Two types of this new vault are produced. One is made of 6-lb. sheet lead over a steel frame, with a steel top covered with the same weight of lead. The top fits into a lute and the vault is vacuum sealed by lead "burning" or welding.

Another type of vault, lower in cost, is made of a 4-lb. sheet lead covering over a 2-in. dressed wood frame. The top likewise fits into a lute and is sealed by "burning."

These vaults are products of the Lead Burial Vault Co. of Baltimore, Md.



Two views of the lead burial vaults recently placed on the market



No. 9

Portsmouth's Heritage Safe with White Lead

THE three Portsmouth, N.H., homes which were shown in the fifth of this series of white-lead-painted American Landmarks were scarcely sufficient to represent the many beautiful old homes to be found there. We, therefore, have chosen three more exceptionally fine Portsmouth landmarks for presentation in this month's Portfolio.

In Portsmouth, as in few other American cities, one may find whole districts where 150 year old homes stand in their original groupings, and where the general aspect remains the

The Austin - Lyman House, an excellent example of the early American Georgian type built in 1782, owes its preservation largely to white lead paint



The present owners of the Samuel Langdon house erected in 1794 continue to protect this valuable landmark with white lead paint

PHOTOS BY DAYTON SNYDER



The Colonel Whipple House, long considered one of the finest in Portsmouth, is being preserved for the future with white lead paint



same as it did during the Revolutionary War. There is good reason for this fact. The expansion of Portsmouth was rapid during the height of the clipper ship era. As this shipping declined during the beginning of the nineteenth century, Portsmouth's rate of expansion declined with it. Thus, With many of them protected for near-placing of old buildings by new ones, many streets in the old section of Portsmouth are practically as they were in 1800.

Not only the aspect of these old landmarks, but also their exterior detail remains little changed by time. With many of them protected for nearly two centuries with pure white lead paint, these magnificent early American landmarks are in excellent condition today. There is little reason to doubt that they will remain for as many centuries to come, protected as they are now with white lead and oil.

THIS IS NO. 9 OF A SERIES REPRESENTATIVE OF THE MANY AMERICAN LANDMARKS IN VARIOUS SECTIONS OF THE COUNTRY THAT ARE PRESERVED FOR THE FUTURE WITH PURE WHITE LEAD AND OIL PAINT. MANY OF THEM HAVE ALWAYS BEEN PROTECTED WITH THIS RELIABLE MATERIAL ACCORDING TO AVAILABLE RECORDS.

Hamilton, Ohio, Specifies Lead for Paint and Water Distribution

NOW celebrating the sesquicentennial of its founding in 1791, the city of Hamilton, Ohio, may well be proud of its reputation as one of the best governed cities in the state of Ohio. Operating under a city council-city manager form of government, Hamilton has reached a high degree of efficiency in municipal purchasing by standardizing on recognized and time-tried materials. The use of pure white lead paint for city owned buildings as well as the use of lead water services and lead calked cast-iron water mains is the standard practice of the city of Hamilton and has material-

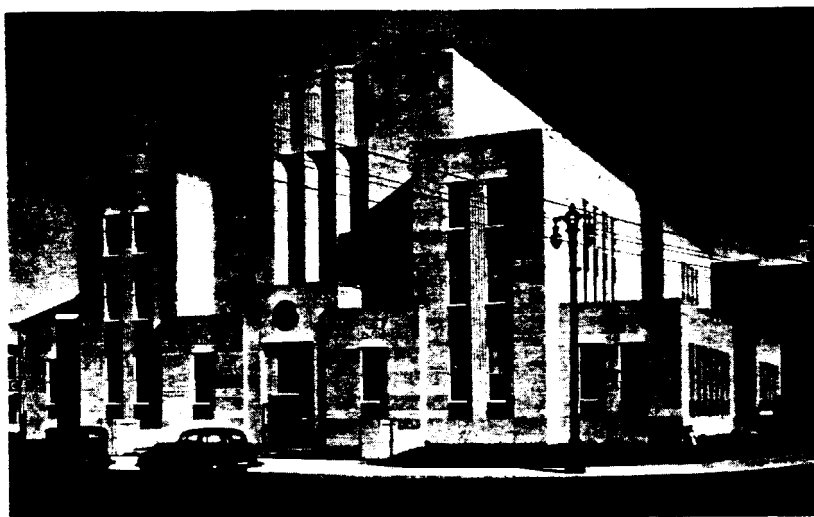
The Municipal Water Works features white lead paint, and the Water Department uses Seal of Approval lead services and calking lead exclusively

specification of white lead has greatly increased economy and efficiency in paint buying and has given results in service unequalled by any other material.

In a recent interview, Joseph B. Hart, Superintendent of Water and Gas Distribution for the city of Hamilton, said that the city had made it a

standard practice to use lead water services and lead calked cast-iron mains since the establishment of the Water Department in 1884. The reliability and long life of lead water services and of lead calked joints has long been established by the hundreds of cities throughout the country that have followed this practice for many years with outstanding success. In a recent issue of LEAD it was revealed that the largest city in the world, New York, has relied almost wholly on these applications of lead for more than a century. (See LEAD, July, 1941). All lead pipe and calking lead used by the city of Hamilton water department bears the Seal of Approval of the Lead Industries Association.

In Hamilton, as in many other cities striving for efficient government, every effort is being made to purchase materials which will supply the utmost in economical service and long life. Lead products with their long record of efficient and economical service and their high degree of standardization have been recognized for years as the answer to many of the problems facing the municipal purchasing agent.



New Municipal Building is styled throughout with pure white lead and oil

ly aided the cause of efficient municipal government.

William J. Welsh, Purchasing Agent for the city of Hamilton, reports that pure white lead paint has proved highly satisfactory for the protection and decoration of both exteriors and interiors of city owned buildings. The new municipal building and the new water works, both completed and dedicated in 1935, as well as seven fire stations and other city buildings, are all decorated on interiors with pleasing shades of long lasting pure white lead paint. In a like manner, exteriors are protected with durable white lead and oil. According to Mr. Welsh, the

First Ward Fire Station protected inside and out with white lead



Lead Vents Are Just as Important as Lead Wastes in Plumbing

THERE is an all too common tendency to regard vent pipes as less important and less apt to deteriorate than soil and waste pipes. Yet experience has proved that to get an installation that will be permanently sanitary the same durable materials should be used for vents as for waste pipe. As a matter of fact the attack on vents is often more severe than on wastes and they are frequently found to corrode through more rapidly. Corroded vent pipes permit escape of noxious gases resulting in unsanitary conditions. Vents partly clogged by rust do not function properly and may lead to siphoning of traps. Also rust in a vertical vent may become dislodged and fall to the bottom, either completely clogging a horizontal vent or the waste pipe to which it is attached.

One particularly bad feature of short-lived vents is that their failure may not be promptly discovered, allowing unsanitary conditions to exist for some time. When a waste pipe fails, the failure usually makes itself apparent in a relatively short time either through appearance of a leak or because waste water does not run promptly away from a fixture. These recognizable signs of failure do not show up a vent not functioning.

Therefore it is wise to construct

both wastes and vents of durable, non-clogging lead. Two examples of good practice in this respect are shown. One is in the new Nurses' Home at Deaconess Hospital, St. Louis, Mo. The other is just across the river in a doctor's new residence in Hill Top, an East St. Louis, Ill., subdivision. In the former, four coils of 11½-in. XL

Lead stubs, wiped up in the shop, awaiting installation in the Nurses' Home, Deaconess Hospital, St. Louis, Mo.

F. D. HAMPSON



Lead vents as well as wastes are used in a doctor's residence at East St. Louis, Ill.



(D) weight lead pipe were used for waste and vent connections on each floor. In addition 4-in. lead was used for closet connections, and 4-lb. sheet lead for 24 shower pans and for all stack flashings. There are 350 plumbing fixtures in all. Likewise the chemical laboratory in the building has 20 chemical sinks, each with a 1½-in. lead trap. Branch wastes and vents in the laboratory are 1½-in. M (B) weight lead and the main waste line is 2-in. lead. Gray and Pauley are architects, Woerman Co., general contractor, and Mid-City Plumbing & En-

gineering Co., plumbing contractor. All are located in St. Louis, Mo.

In the East St. Louis residence it can likewise be seen that lead is used for both wastes and vents, thus precluding the possibility of early failure from either source. The architect is F. H. Peiper of Overland, Mo., the general contractor is Loren M. Krause of East St. Louis, and O'Flaherty Plumbing Co. of East St. Louis is the plumbing contractor.

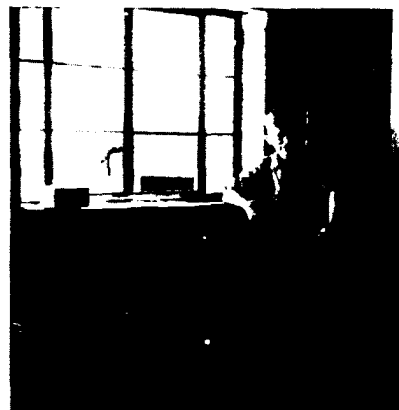
SPECIFY **SEAL OF LEAD INDUSTRIES' MATERIAL APPROVAL**



Left, lead waste and vent connections in the Nurses' Home, Deaconess Hospital, St. Louis, Mo.

F. D. HAMPSON

Right, lead wastes and vents in an East St. Louis residence. It is standard practice there





Brick, Stucco, and Cement

THE widening recognition of paint as an economical solution to modernization as well as styling problems is no where better evidenced than in the increasing demand for fresh decorative treatments on brick, stucco and cement siding areas. This trend is a direct reflection of the popularity achieved by paint styling in recent years which has made home owners unwilling to endure the monotony of single siding treatment while neighboring houses are modernized or freshened-up periodically by simply taking advantage of the limitless decorative combinations possible with paint.

Paint Styling

The desire for styling variations is further augmented by the spreading realization that every home regardless of size, cost, materials or location can be made distinctive at low cost with but a couple of coats of paint. The consequent demand for appropriate treatment is not only having a paramount influence on the sale of new housing, but is also creating problems for the architect and builder whose responsibility it now becomes with increasing frequency to specify paint for comparatively unfamiliar surfaces. In other words, while the selection and formulation of paint for clapboards and shingles which are invariably painted for decoration and protection has long been pretty well standardized, "difficult" surfaces such as brick, concrete and stucco never have received as much emphasis in painting circles.

Although decoration is generally the motivating reason for painting a house, equally important is the prevention of moisture absorption by such highly porous surfaces as masonry and other cement mix materials. Frequent saturation is conducive to

surface dusting and unsightly efflorescence, while moisture expansion upon freezing may well result in serious crumbling and consequent repair and maintenance problems. Correctly formulated paint proves the answer all around by sealing the surface and thus eliminating the cause for disintegration and staining.

Beware Destructive Alkalis

Although by lucky chance paint may give satisfactory service without investigation as to the condition of brick, stucco and concrete at the time of application, surface preparation plays an important part in producing styling of satisfactory durability. Exceptionally porous materials must be thoroughly dried out to assure the firm adhesion of even pure white lead and oil, while the presence of active alkalis, commonly found in cement, must be checked and corrected before applying the priming coat. Soluble alkalis are most destructive to an oil paint film, so all construction materials containing cement should be allowed to weather for several months before painting in order to bring about their neutralization by the carbon dioxide in the air. However, if a weathering period is not convenient, neutralization is readily accomplished artificially by washing the affected areas with a solution of two pounds of zinc sulfate in a gallon of water. After this wash has dried out thoroughly, paint may be applied with security as to the results.

Remove Efflorescence

The development of a whitish crust or stain on concrete and stucco—like that familiarly found on masonry surfaces—is nothing but soluble alkaline salts which have seeped out due to the presence of moisture in the wall or siding and precipitated due to evaporation. This extrusion will eventually cease as weathering progresses, the

accumulated stains being gradually washed away by the rain. However, if efflorescence is evident at the time of painting, it is essential that all the stains be removed by vigorous wire-brushing to assure a firm foundation for the priming coat.

In painting previously decorated brick as well as other surfaces featuring cement base materials, great care should be exercised to ascertain the composition of the coating previously applied. Naturally, if the original coating is found to be an oil paint still in good condition, repainting may proceed without further ado. However, should the original coating be the once popular whitewash or a cold water treatment, complete removal is obligatory, as these comparatively temporary coatings would form an insecure foundation for paint topcoats to follow. In the latter case, the procedure is as for new work, three coats being applied, while on actual repaint jobs two coats suffice in the vast majority of cases.

Paint Selection Important

The selection of paint for styling on brick, stucco and concrete calls for care and experience, because these "difficult" surfaces require paint of unusual formulation. As a result, the paint should be hand mixed from the paste pigment and pure vehicle ingredients to obtain a suitable product. The porosity of the surfaces is such that the priming coat must be specially prepared to meet the requirements of the type of surface in question, while only by actually mixing all the paint on the job is there security as to the quality of the ingredients and assurance that the several coats will produce the balanced coating essential for durability. Consequently, to be on the safe side, it has become the standard procedure to specify pure white lead paint to be mixed on the job assuring the latitude in formula-

tion necessary to meet all contingencies.

Proper Formulation

For the priming coat on common brick the consensus of expert opinion calls for 3 parts (by volume) soft paste white lead, 5 parts pure raw linseed oil to one part gum spirits of turpentine. The high oil content of this primer satisfies surface porosity, preventing the absorption of oil from the topcoats to follow. When this initial coating is followed by a body coat of 3 parts soft paste white lead, 3 parts linseed oil and 1 part turpentine a firm foundation is established for whatever finish is desired.

Because pressed face and de-aired brick are less absorbent than what is known as common variety, less linseed oil is required in the priming and body coats for these more easily satisfied types. Generally one part less linseed oil in each case produces a satisfactory mixture. On the other hand,

for concrete and stucco apply a priming coat of 3 parts soft paste white lead and 5 parts of an equal mixture of raw linseed oil and lead reducing oil or lead mixing oil. For the second or body coat equal parts of the soft paste white lead and lead reducing oil or lead mixing oil proves most effective.

Whether the siding be brick, concrete or stucco, the same formulas suffice for a flat or glossy finish. To produce the former, apply a single coat of equal parts, (by volume), soft paste white lead and lead mixing or lead reducing oil, while for a glossy coating merely substitute raw linseed oil for the flattening vehicle.

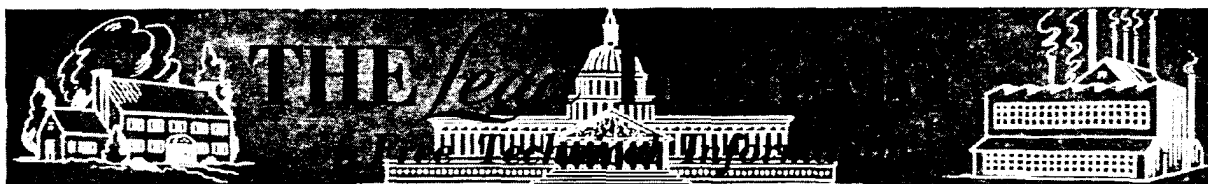
Tint Undercoats

A "trick of the trade" which has proved most effective in color styling—particularly on brick—is to tint each undercoat slightly darker than the topcoat to follow. This increases

the apparent color retention as well as the opacity of the finish. Any of the lighter shades now popular for siding decoration are readily produced by simply adding colors-in-oil to the white paint mixture.

With the use of raw linseed oil the addition of at least 1/4 pint of drier per gallon is essential to expedite the firm setting-up of the paint film. However, under climatic conditions particularly unfavorable for the oxidation—the drying—of paint, as much as a quart of liquid drier has been added per gallon without adversely affecting the durability of pure white lead paint. On the other hand, with the use of lead mixing oil or lead reducing oil no drier is required.

Thus the complex problem of painting various surfaces other than wood is easily solved by the use of one standard painting material—pure white lead—simplifying procedure and assuring uniform quality at all times.



The following articles and reprints contain information, drawings and specifications on the use of lead products helpful to architects, engineers and others in the construction industry. They are available, free of charge, upon request to the Lead Industries Association, 420 Lexington Avenue, New York City.

WHAT TO EXPECT FROM WHITE LEAD PAINT

An attractive 28-page booklet with charts, formulas, and mixing instructions covering some of the problems of painting and how white lead meets these problems.

PAINTING YOUR HOME by Dr. F. L. Browne, Senior Chemist, Forests Products Laboratory, Madison, Wisc.

A discussion of house painting reprinted from American Forests, May, 1939.

SOME PAINTING PROBLEMS AND THE ANSWERS

By Dr. F. L. Browne, Senior Chemist, Forests Products Laboratory, Madison, Wisc.

Reprinted from the National Real Estate Journal, Sept., 1939.

STAMFORD'S DOUBLE LIFETIME HOME

A complete analysis of hard lead flashing, white lead paint, lead plumbing, plywood and red cedar Certigrade shingle details and installation methods. Reprinted from the American Builder, July, 1939.

SHEET LEAD INSTALLATION DETAILS

A detailed analysis of the principles and application of lead flashing and sheet lead work for small homes. Reprinted from Sheet Metal Worker, June, 1939.

UPON REQUEST, THE LEAD INDUSTRIES ASSOCIATION WILL BE GLAD TO MAIL "LEAD" REGULARLY, FREE OF CHARGE, TO THOSE INTERESTED, AND WILL COOPERATE WITHOUT OBLIGATION, IN THE SOLUTION OF YOUR LEAD PROBLEMS

BRUSH UP ON YOUR PAINTING

A practical article on the selection and application of paint reprinted from House Beautiful, June, 1941.

LASTING LEADWORK IN MODERN PLUMBING

By T. N. Thompson, Technical Editor, Plumbing and Heating Journal.

Reprinted from Plumbing and Heating Journal, Feb., 1939.

HOW LUMBER AND PAINT KEEP YOUR HOME ALWAYS IN STYLE

A brief digest of the advantages of painted lumber homes with color-styling suggestions and other interesting information.

LEAD CHIMNEY CAPS

Notes on the installation and advantages of lead chimney-cap protection, reprinted from American Artisan, May, 1940.

NEW SIMPLIFIED STANDARD FOR LEAD TRAPS AND BENDS

File size leaflet with new standards for lead traps and bends as well as existing standards for lead pipe and calking lead, and other informative data.