Red Lead on All Steel Sash in Parkchester Famous New York Apartment Group

PARKCHESTER is a name familiar to all students of modern housing. housing financing and city planning. Parkchester is the largest individual housing project ever attempted and it is an achievement which will help to guide all housing planners in the developments which are sure to come when the war is ended.

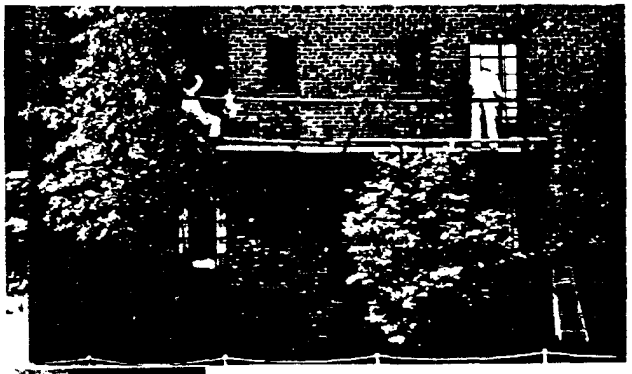
The tremendous size of Parkchester set up many problems of administration, management and upkeep which had to be solved successfully to keep it a smooth running, pleasant community. Maintenance alone requires the services of a large staff under the skilled management of competent superintendents whose entire time is devoted to the work of keeping the buildings in proper condition.

It is the policy of the operating department to minimize maintenance costs by the use of high grade durable materials and first class workmanship eliminating, as far as possible, damage and failures which would require expensive repair and replacement jobs. Thus the repainting of all of the steel sash and window sills which is being done at the present time is started with a priming coat of red lead paint.

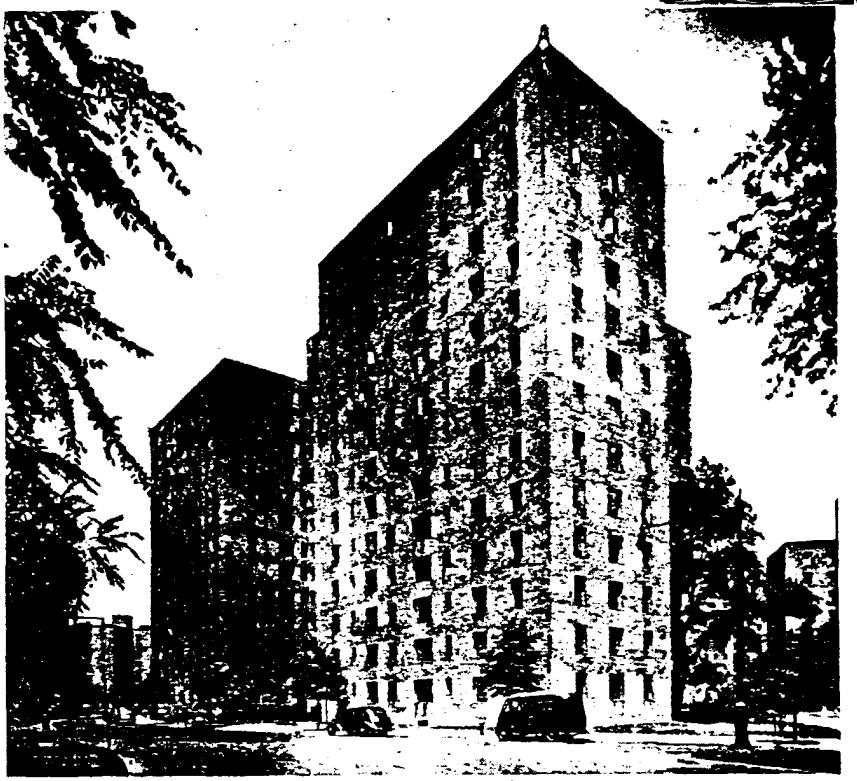
Painting all of the window sash and sills in a community of over 12.000 residence units is a large undertaking. It is being done under contract by two painting contractors, Hudson Painting and Decorating Co. and Herman Levin Co., working in different areas of the project. More than 2.000 gallons of red lead paint is being used. When it is completed every window in all of the buildings will have the added protection of a new coat of red lead paint.

Detail of window sash sill and lintel with fresh coat of rust inhibiting red lead paint.

Right, applying red lead paint to sash from staging.



Below, one of the 51 buildings of Parkchester, Metropolitan Life Insurance Company's apartment group, every window brilliant with its undercoat of red lead paint.



PHOTOS BY DAYTON SYNDER

Two years ago red lead paint was applied to the steel sills of the windows throughout the buildings and now these members are receiving an additional coat of red lead along with the sash. Thus an extra thick protection of highly weather resistant paint is being built up on the metallic surfaces subject to the most severe exposures of sun and rain.

One of the most attractive features about Parkchester is the clean, well kept appearance and the feeling it has of permanence. This together with its great size and the high quality of materials used in its maintenance will insure its stability as an attractive residence community for many years to come.

Lead-Alloy Flashings on Residence Group Under Construction in Stamford, Conn.

WHILE all housing construction has been carried on under handicaps of material procurement difficulties during the past two years, builders of permanent structures have faced especially tough problems. Substitute materials of limited durability are acceptable for use on temporary buildings but dependable materials are needed to safeguard investments in permanent dwellings which are financed by long term loans insured by the Federal Housing Administration.

Roof flashings are an especially vulnerable detail unless they are of durable material and when they occur in connection with masonry construction the work and expense involved in their repair or replacement makes their durability of extra importance.

The use of lead or lead alloy sheet for flashing purposes has been increasing as architects and builders have come to realize that this oldest of roofing metals is available for such use. The use of sheet lead for roofing and flashing is not now restricted in any way by the War Production Board. Restrictions on thickness which were once imposed on these uses have now been removed.

One of the most recently constructed permanent housing projects to have lead adopted for flashings is Mayflower Gardens in Stamford, Connecticut. This group of five buildings contains 54 duplex type apartments of 4½ rooms each with bedrooms on the second floor. It is of brick veneer construction with slated asphalt shingle roofs. All flashings are of 2½-lb. lead alloy sheet, including valleys, base and cap flashings at walls and chimneys and porch roof flashings. Lead flashings, where in contact with masonry, are painted with heavy asphalt paint.

The owner, Old Colony Gardens Inc., of Stamford, Conn., need have no fear that rust or corrosion will damage or destroy this material. The resistance of lead to these forces is well known and has been demonstrated through centuries of exposure. They are likewise sure that they will not be bothered with troublesome staining of woodwork or masonry.

Mayflower Gardens project was designed by W. J. Provoost, architect of Stamford, Conn. It is being built by Old Colony Homes Inc. under the direction of Mr. Dewey Swan, supervising architect, also of Stamford.

Completed porch showing flashings in place.

Completed flashings to walls and chimney and at cornice returns.

Below, cap flashings at roofs and cornice returns are built into brickwork.

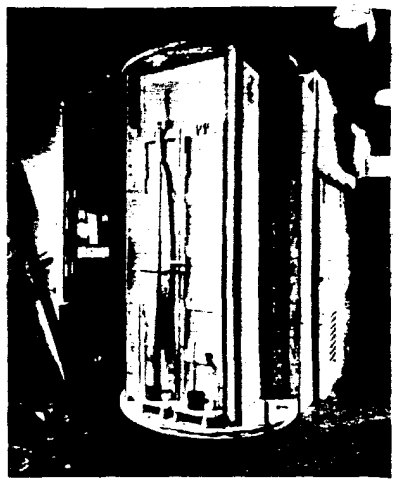
PHOTOS BY DAYTON SYNDER

Special Lead-Lined Room and Fixture Speeds X-Ray Inspection of Propeller Blades

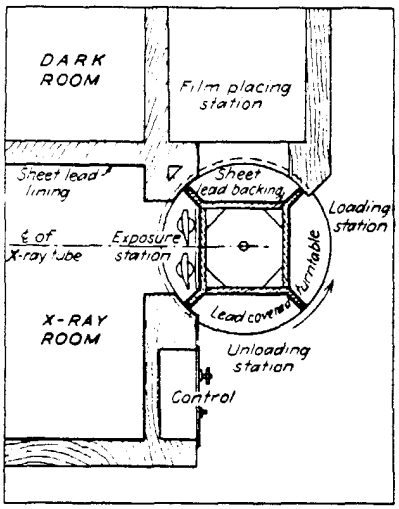
PROBABLY no industrial process has received greater impetus from the increased tempo of production imposed on industry by the war than the adaptation of X-rays to the inspection of manufactured metal objects. X-rays provide the only non-destructive means of observing the entire volume of a solid metallic object and discovering flaws and defects which may exist beneath the surfaces. Not only does such inspection prevent faulty material from being put into service where its failure might have serious consequences but it enables engineers, through study of defects and their character, to design and plan better manufacturing procedures.

Production machines for both photographic and flouroscopic inspection of parts have been developed but certain objects propose unusual problems which must be solved by specially built equipment if the required speed of production is to be attained. Such a solution for the photographic inspection of welded hollow steel propeller blades is shown in the accompanying photographs and drawings. It was developed and built by the Ray Proof Corporation, New York City, specialists in X-ray protection equipment and installations.

As can be seen in the drawing, the machine consists of a lead lined X-ray room at one end of which is located a turntable with four lead backed sides. On this turntable the propeller blades and suitable film holders can be mounted outside of the room. The turntable revolves to bring successive loads into the exposure position and thence to the unloading position outside.



Turntable from loading station with one propellor blade in place.



Plan showing relation of turntable to center line of X-ray tube.

The turntable is so constructed that it provides a constant lead barrier against the escape of any dangerous radiation. It thus allows the operators to work unhampered by clumsy protective garments or the fear of injury by stray radiation.

Several of these machines are in operation and they are said to have more than tripled the output of the X-ray departments where they are used.

This is but one example of many ingenious applications of lead shielding to special X-ray protection. Recent developments in the use of flouroscopy for direct visual X-ray inspection suggest the likelihood of many similar applications in peacetime production.

Blades in exposure position in X-ray room. Note walls constructed of laminated lead-plywood panels secured with lead head nails.

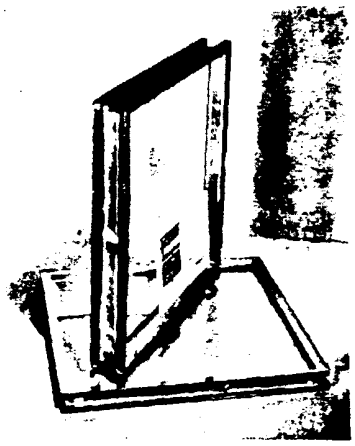
Lead Alloy Strip a Part of Air Tight Seal in Insulating Window Glass

DOUBLE glazing as a means of insulation for windows and observation openings has been used successfully for many years. However, double glazing has been subject to dirt accumulation and condensation as well as "blooming" or discolorations on the enclosed glass surfaces. The glass industry has solved the problem of "blooming" by means of improvements in glass composition but until recently dirt and condensation have continued to be troublesome. Now these nuisances have been eliminated by the use of an air tight seal of which a lead strip is an important part.

Thermopane, a multiple thickness glazing consisting of two or more sheets of glass separated by sealed air spaces has been perfected by the Libby-Owens-Ford Glass Co. of Toledo, Ohio. The spacer between the glass sheets is a thin strip of lead alloy and the air tight seal is effected by soldering the lead to a narrow band

of copper alloy fused to the glass. After the seal is made, two perforations are made in the lead strip and two tiny tubes are inserted. Through one tube dried air is forced into the space while a vacuum on the other tube draws out any dampness that may have been enclosed. The tubes are then withdrawn and the holes are sealed with solder. No attempt is made to create a vacuum since glass is sufficiently elastic to be distorted by a difference in air pressure.

Lead alloy is particularly adapted to this use because its softness and freedom from elasticity tend to compensate for the hardness of the glass and to eliminate stresses which might result from inside and outside temperature differentials or setting strains.



Sample squares of Thermopane. The sealed holes for moisture removal and soldered lap joint of the lead strip are plainly visible.

The growing demand for larger glass areas in houses, the development of solar heating and increasing application of air conditioning have created a demand for a successful solution to the problem of double glazing. Thermopane now makes possible large glazed openings in climates where such features have long been considered a hazard or an unjustified expense. Three or even four thickness installations will make possible the use of windows in low temperature refrigerators. The lead separating strip can be depended upon to retain its desirable characteristics through any temperature range safe for the glass to which it is attached.

Lead Industries Association's Standards Amended to Include Reducing Bends

SINCE the Emergency Plumbing Standards for Defense Housing require the use of a 3-in. soil stack and since the standard water closet has a 4-in. nozzle for insertion into the lead bend at the floor flange connection, it is necessary in making such a connection to have a reducing fitting of some kind. Naturally the simplest and most direct means of providing this reduction is in the lead bend. This is an economical method as well since it eliminates the need for reducing fittings in the cast iron pipe installation and allows the use of a 3-in. calking ferrule.

In order that architects and engineers may have a definite basis for the specification of reducing lead bends the Lead Industries Association has amended its standard for lead traps and bends which has been in effect for several years to include standard specifications for reducing bends. Bends meeting these standards can be identified by the familiar Seal of Approval of the Lead Industries Association.

The amendment requires that the reducing bend shall be so formed that the reduction in diameter shall not produce any obstruction to flow through the pipe. It reads as follows:

"Reducing bends shall be considered as meeting this standard only if the reduction in diameter occurs exclusively on the top and sides, leaving the bottom of the bend, when in the installed position, smooth and straight so that it can not form a trap for substances passing through the bend, and if they meet the requirements of this standard in all other respects except total weight."

The Seal of Approval of the Lead Industries Association has in the short time it has been in use become a widely used mark of identification for dependable lead materials. The adoption of this amendment to the standard for traps and bends extends the protection afforded by this assurance of high quality to cover another fitting made necessary by the adoption of emergency war regulations. Lead pipe, lead traps and bends and calking lead bearing the Seal of Approval have been available for some years. The hard lead closet flange was recently added. The reducing bend is the latest addition to the list of materials so identified.

Approved reducing bend showing the Lead Industries Association's Seal of Approval stamped on top of the horizontal leg.

Lead Acid Batteries Adaptable to Varied Uses

THE lead-acid storage battery is one of the most important sources of electrical energy. While it is not a primary source and must be given periodical attention and recharging, it is so dependable that it is commonly used as a standby in installations where the failure of electric current might be disastrous. It is also a regular source of power for railroad signals, telephones, radio and other electrical equipment.

Different kinds of services require batteries with suitable characteristics but storage battery manufacturers are prepared to supply batteries which will furnish packaged horsepower for submarines or small constant current for unvarying monitoring of laboratory controls as the users may demand.

One of the most recent developments in storage batteries is a charge retaining 6-v. unit designed to withstand low current drain for a long period of time before recharging. It is reported to maintain high operating voltage throughout the discharge period even in warm weather.

This battery is approximately the same size and shape as the familiar "hot shot" 6-v. dry battery which is commonly used for telephones, electric fences, stationary engine ignition, signaling and many other services requiring small current capacity. Compared with the automobile starting battery which is designed to furnish very high current for short periods of time and which self discharges if neglected, it is an excellent example of the wide range of characteristics which manufacturers of lead-acid storage batteries are able to build into their products to meet varying requirements of their customers and users of their products.

Charge retaining lead acid storage battery is approximately the same size as 6-v. dry battery.

Paint Tinting and Color Mixing II

ALMOST every job of paint tinting is to some degree a matter of color matching. Either a selected sample is presented to be matched exactly or a certain tint to harmonize with adjacent colors must be produced. In either case the tinting and matching should be done under the same kind of light which will illuminate the painted surface after the paint is applied. This is particularly true if the sample to be matched is a fabric, a printed color chip or any other material except paint because the appearance of different pigments and dyes vary in different degrees under changing lights.

It is always wise to estimate quantities carefully to be certain that a sufficient amount of paint is tinted. It is sometimes very difficult to duplicate a color exactly in case a small additional quantity of paint is needed. It is one of the incidental advantages of pure white lead paint that a large quantity of white lead paste may be tinted to the required shade in a single batch and thinned to painting consistency as needed, thus eliminating the necessity of attempting to make two or more batches of the same shade.

The first step in tinting such a batch is to reduce the white lead paste to stirring consistency with a part of the oil called for in the mixing formula. Next the basic tinting color must be selected. This will be the color which will produce a shade as near to that of the sample to be matched as possible. This selection will be based upon a knowledge of tinting colors and their effect when mixed with pure white lead paint as was discussed in our March-April issue.

The color, thinned with turpentine or oil, is stirred into the white lead paste slowly until a light but definite tint is produced. At this point it will usually be possible to select a modifying color if one is required to bring the paint to the color desired. When it is decided that the selection is correct the basic and modifying colors are added a little at a time until the mixture is brought to the desired shade or key.

Unless the color sample to be matched is wet paint, it is always best practice to apply a small sample of the tinted paint to a surface and material similar to the one to be painted and allow it to dry. Most paints will seem to change color slightly as they dry and a final check should be made with a dry sample. If time is limited a sample applied to blotting paper will approximate the results of natural drying and indicate whether any further adjustment of the tint is necessary.

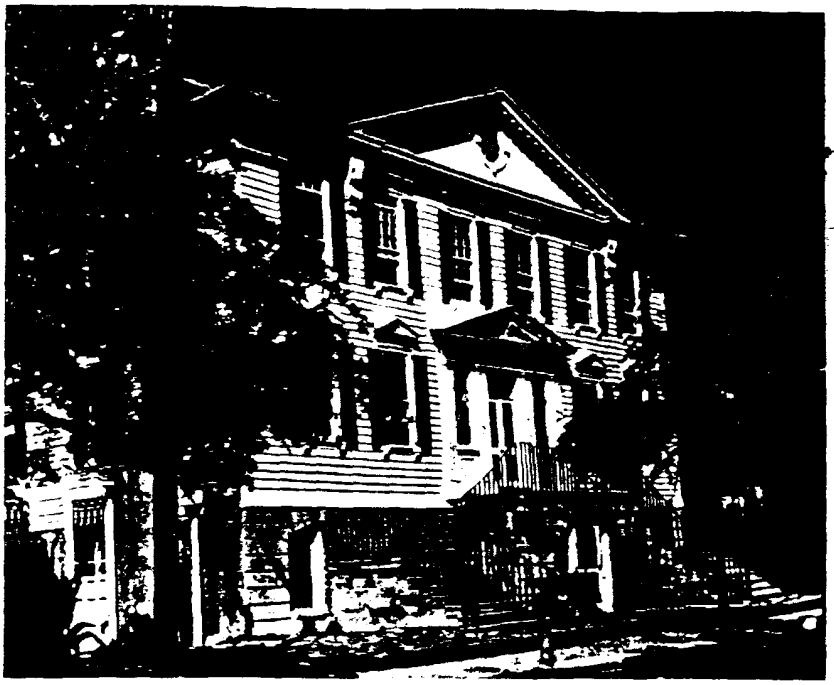
In cases where paints are tinted for color harmony rather than to match a sample, care should be taken that samples are viewed against a background similar to that which they will have when applied. For instance, if a new brick wall is to be painted the sample color should be applied to an isolated board or panel rather than to the wall itself where it will contrast with the color of the brick. Similarly on interior work, a small sample should not be applied to a bare white plaster wall because it will look darker than it will appear when the entire wall is painted.

In the development of color schemes the advantage of tinted white lead paint can not be underestimated. The decorator is not confined to a limited range of colors nor is he subject to the disappointment of differences in color between the paint manufacturers' color chip and the actual paint. Pure white lead is easily tinted to the exact color desired to match or harmonize with any scheme that can be devised. It retains tints well and tends to slow the fading of colors.

A Portfolio of American Landmarks

No. 26

Two Houses Widely Separated Show Similarity



RONALD ALLEN REILLY

The William Gibbs House, Charleston, S. C., built in 1789 has been newly repainted with pure white lead paint.

IN this month's Landmarks an interesting comparison is offered of two houses of approximately the same date of construction in widely separated locations. Each shows planning and structural characteristics common to houses in its neighborhood but in detail they bear striking resemblance to each other.

The Colonel Robert Means house in Amherst. N. H., is set low over a cellar entirely underground, obviously a storage space for fuel and supplies.

The Col. Robert Means House in Amherst, N. H., built in 1875, is protected and beautified by pure white lead paint.

DAYTON SYNDER

The William Gibbs house in Charleston, S. C., stands on a high basement which is the service part of the house.

There is a remarkable similarity between the elaborate cornices, the shaped modillions being almost identical in scale and spacing. The Gibbs house lacks the dentil course which adds refinement to the Means house. The broken architrave over the second story windows of the Means house is recalled by the break front cornices over the windows of the Gibbs house.

The similarity of detail on these two widely separated houses is without doubt a coincidence. However it is not a coincidence that they are both painted with pure white lead paint. North or south, in cold climate or hot, there is no better paint than the pure white lead with which these houses and many other American landmarks have been painted and preserved for our enjoyment. Modern painters take pride in carrying on the tradition of their predecessors who used pure white lead paint so effectively to protect the historical structures of our country.

THIS IS NO. 26 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.

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KANSAS CITY SMELTING CO. ..... Kansas City, Mo.
THE LEWIN-MATHES CORP. ..... St. Louis, Mo.
JOHN R. MacGREGOR LEAD CO. ..... Chicago, Ill.
METALS REFINING CO. (The Glidden Co.) ..... Hammond, Ind.
MIKE HORSE MINING & MILLING CO. ..... Helena, Mont.
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UNITED STATES SMELTING REFINING AND MINING CO., INC. ..... New York, N. Y.
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THE WENSLEY METAL PRODUCTS CO. ..... Denver, Colo.
WHITE METAL ROLLING & STAMPING CORP. ..... Brooklyn, N. Y.
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* Associate members.

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 17, N. Y.

LEAD CARRIES ITS WEIGHT
By Fred P. Peters
An interesting resume of many of the long established uses of lead plus information on a number of recently developed adaptations of the properties of lead to special purposes. Reprinted from *Scientific American*, June, 1944.

RED LEAD FOR STRUCTURAL WORK
By Dr. L. L. Carrick, Director, Red Lead Research, Lead Industries Association
A discussion of the rust inhibitive qualities of red lead paint and the best means of making use of those qualities for the protection of structural metal. Reprinted from *Engineering News Record*, April 6, 1943.

PROPERTY PROTECTION WITH WHITE LEAD PAINT
A 28 page booklet on the protective value, durability and beauty of pure white lead paint with quantity estimating tables, formulas and mixing and tinting instructions for exterior and interior use.

SOME PAINTING PROBLEMS AND THE ANSWERS
By Dr. F. L. Browne, Senior Chemist, Forests Products Laboratory, Madison, Wis.
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.

SUMMARY OF NOTES ON LEAD ROOFING
A brief description of the uses of lead for roofing and flashing purposes and the proper practices of its application. Reprinted from *Sheet Metal Worker*.

* Not previously listed.

LEAD EQUIPMENT USED IN INDUSTRY
By F. E. Wormser, Secretary of Lead Industries Association
A summary of the uses of lead in the production and handling of corrosive chemicals. Reprinted from "Metal Progress" to be included in the next edition of *American Society of Metals Handbook*.

WHITE LEAD PAINT FOR DEFENSE HOUSING
Reprint from Bulletin of the Producers' Council including specifications and graphic mixing instructions for exterior and interior White Lead Paint.

COMMERCIAL STANDARDS:
Calking Lead, CS94-41
Lead Pipe, CS95-41
Lead Traps and Bends, CS96-41
Official publications by the Government Printing Office of the above Commercial Standards as promulgated by the U. S. Department of Commerce through the National Bureau of Standards, effective June 25, 1941.

LEAD PLUMBING FOR DEFENSE HOUSING
Reprint from Bulletin of the Producers' Council including information on the Emergency Plumbing Standards and the Defense Housing Critical List.

NEW LEAD COATING PROCESS ELIMINATES USE OF ZINC ALLOYS
By W. Yonkman, Engineer, Western Electric Co.
A description of a successful hot dip lead coating process with complete instructions for changing over from hot dip galvanizing using the same equipment. Reprinted from *Product Engineering*, May, 1934.

STOP DEMON RUST
Leaflet giving concise, simple instructions in the use of the rust preventing qualities of Red Lead Paint in protecting farm machinery.

PARTIAL LIST OF USES OF LEAD NOT RESTRICTED BY CONSERVATION ORDER M-38

Anodes
Anti-Knock treatment for motor fuels
Bearing metals
Calking lead, lead wool
Ceramics (except as on ingredient of ornamental glass)
Chemical equipment—tanks, linings, piping, pumps, valves, filters, evaporators
Coatings on iron, steel and other metals
Collapsible tubes
Counterweights (except sashweights)
Die casting for process work
Fittings—traps, bends, floor flanges, ferrules
Flooring in chemical and explosives plants
Gaskets and packings
Insecticides and chemicals
Manufacturing equipment for synthetic fibres
Metal pickling tanks, spray nozzles and piping
Mould material for casting plastics
Name and instruction plates
Paint pigments—white lead, red lead, blue lead, litharge
Pipe—soil, waste, water service and chemical
Plating tank linings
Roofing, flashing, gravel stops, damp proofing
Safety treads
Scientific and experimental apparatus
Sheathing for electric cables
Shot—ammunition
Shower pans, floor safes, waterproofing
Solder
Storage batteries
Substitution for more critical metals
Varnish making—driers
Vulcanizing moulds
Window cames—glaziers lead
X-ray and radium protection

USE PERMITTED WITH CERTAIN RESTRICTIONS

Automobile body solder
Casket hardware—casket linings
Foil

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BY PUBLISHERS PRINTING COMPANY
NEW YORK CITY