LEAD INDUSTRIES ASSOCIATION, INC.
292 MADISON AVENUE
NEW YORK 17, N. Y.

L.I.A. - 1962 MODEL

Robert L. Ziegfeld, executive vice president
and the L.I.A. staff

Over the 34-year span of L.I.A.'s existence, the scope, the activities and the personnel have changed from time to time to meet prevailing conditions. Born late in the booming '20's, the Association survived the great depression of the '30's and the strenuous war years with their government controls that sounded the death knell of some applications. Then came the post-war readjustment with periods of shortages that also took their toll, and now a protracted period of world oversupply.

Despite the fact that 1961 lead business bounced back from an abnormally low first quarter to the best fourth quarter in several years, your Board of Directors and Industry Development Committee have wisely designed the L.I.A. 1962 model to meet the need for further stimulation of lead consumption. This is what I want to describe to you now, since my detailed report of 1961 activities has been mailed to all members.

Our 1962 program is just shifting into high gear. It will be the broadest industry promotional program ever conducted in the interests of lead. It is not a haphazard program but rather it has been planned with very specific objectives. It embraces both old and new lead products, old and new markets, and employs a variety of promotional tools. Our studies, for example, have convinced us that much can be gained immediately from concentrating on some existing markets that have been undersold. But we cannot neglect new possibilities.

Our advertising in 1962 is concentrated in 14 different trade publications in six general areas of lead application. The total circulation of these magazines is about 425,000, and nearly 4,000,000 individual advertising messages on lead will appear in them. This almost doubles our 1961 effort.

Lead for roofing and flashing, noise and vibration control and other building applications will be featured in 13 pages of advertising in "Engineering News-Record" and 12 pages in "Progressive Architecture." These publications have professional circulations of 84,000 and 40,000, respectively. Noise and vibration control are relatively new uses with what appears to offer substantial markets for lead as better engineering data are developed through research. Roofing and flashing are centuries old but this market has never been aggressively developed and economics are now in our favor. One recent ad we ran resulted in more than 200 live inquiries on lead roofs in less than 30 days and we are working with architects and engineers that have well over 100 tons of lead roofs currently on their drawing boards.

Presented at the 34th annual meeting -- Lead Industries Association, Inc., Chase Park-Plaza Hotels, St. Louis, Missouri, April 11, 1962.

Look Ahead with Lead

For a somewhat different purpose, to stimulate the thinking of design engineers to use the properties of lead in the solution of design problems, particularly in new products, our campaign of bi-monthly ads in three design publications, "Materials in Design Engineering," "Product Engineering" and "Machine Design," with combined circulation of about 135,000 engineers, is continuing. By telling designers what lead is doing and can do in a more or less technical way, it is hoped to find new applications for lead in a wide variety of products.

Our program on lead in all forms of ceramics is continuing in the three major publications in that field, "Bulletin of the American Ceramic Society," "Ceramic Industry" and "Ceramic Age," using six pages in each. This is supported with a continuing six-page campaign on porcelain enamelled metals in "Metal Product Manufacturing." These publications have a combined circulation of about 33,000. Here it is interesting to note that consumption of domestically produced lead products in ceramics has remained quite constant at about 17,000 tons of lead per year since our campaign started about four years ago, but that since several of the largest ceramic frit manufacturers are now using upwards of 5,000 tons of imported lead oxides not used five years ago, a growth of some 30 percent in lead consumption is indicated. This is despite the migration of much of the U.S. china and pottery business to Japan and Europe. In this time we have become well entrenched in porcelain enamelling of aluminum and are just starting to break into the porcelain enamelling of steel.

Our 1962 model has three new campaigns designed into it. They are in the fields of paint pigments, power distribution and industrial management. The first will consist of seven double spreads in "American Paint Journal" and "Official Digest" and seven pages in "Paint and Varnish Production," with combined circulation of 31,000. The purpose of this program is to apprise technical and management people in the paint industry of the latest developments in both old and new lead pigments, to suggest ways to use them in their own paints, and to encourage paint companies to test them in their own formulations. The use of lead in the manufacture of paint pigments has shown a marked decline. Since 1947 the drop has been from over 100,000 tons to about 50,000 tons. However, red lead, which we have actively promoted since World War II has maintained almost a constant level of production, and lead chromate colors, for which there has been no good economical substitute, has shown a moderate increase although fluctuating from year to year. We feel this campaign is needed to maintain this position for red lead and to find new markets for some of the other lead pigments, some of them quite new. Mr. Broderick yesterday described some of our opportunities with respect to lead chromate.

For many years the use of lead cable sheathing has been declining. Most of the decline has been in telephone cable but there appear to be sound engineering reasons for using more lead in power cable sheathing. This year L.I.A. is embarking on a new advertising campaign with 8 one-page ads in "Electrical World" to extoll those reasons to 30,000 people in the electrical industry. While we hope to expand this market the present 60,000 ton consumption rate is worth maintaining.

In addition there are several lead products whose usage cuts across a variety of industries which cannot be reached by a single trade paper or group of papers serving specific industries. Materials and personnel handling, noise and vibration control are examples of lead usage that could apply to almost any heavy industry. To reach this market in 1962 we will use eight one-page ads in "Factory" devoted largely to lead-acid batteries for motive power and to the use of lead in noise and vibration control. This will reach some 72,000 people at the middle management level in a great variety of manufacturing industries. While storage batteries are currently the largest user of lead, most of it goes into automotive batteries. However, we estimate a potential additional market for some 75,000 tons of lead in improved batteries for powering lift and other industrial trucks, personnel carriers, delivery trucks and the like, and an unknown amount in batteries for such items as hand power tools.

So much for our space advertising plans. A direct mail program of equal ambition is also approved and will tie in closely with the advertising campaign. You are all familiar with our external house organ "Lead." This eight-page quarterly has been published for over 30 years and meets with a warm reception by over 50,000 people in a variety of classifications such as construction engineers, architects, design engineers, ceramists, chemical engineers and many others. This is continuing and the mailing list is being constantly expanded so that it now carries some million and a quarter messages on all sorts of lead uses to users and specifiers each year.

We are also carrying four catalogs in Sweet's catalog files. One is a 12-page catalog on the properties and uses of lead in the Product Design file with a circulation of 19,000 design engineers. In the Industrial Construction file of 14,000 architects and engineers working on factories and similar construction we have two 4-page catalogs, one on roofing and flashing, and one on noise and vibration control. In the architectural file reaching 20,000 architects of all kinds we have three 4-page catalogs on plumbing, roofing and flashing, and noise and vibration control. The Light Construction catalog reaches about 29,000 builders of small homes. In this we have one 4-page catalog on plumbing. The total circulation is thus 82,000.

A report on lead for control of noise in building construction, based on research of the last two years, is in preparation and will be given wide distribution to architects, accoustical engineers, engineering and architectural schools and others. It will be a comprehensive and detailed manual showing the effectiveness of various types of construction with and without lead in stopping the transmission of sound. As research develops further information, supplements to it will be published.

Based on earlier research a preliminary report on the effectiveness of lead in controlling transmission of vibration has been prepared. Since this research is continuing to develop more comprehensive and reliable data, it is hoped that by later in the year a more ambitious manual can be issued and given wide circulation to architects and engineers.

Other direct mail pieces planned for 1962 include one or two supplements to our loose-leaf manual "Lead in the Ceramic Industries," several flyers on architectural applications of lead such as roofing and pool linings, a manual on lead paint pigments similar to our ceramic manual, a brochure on lead cable sheathing, and two brochures on lead motive power batteries, one dealing with street delivery trucks and one with miscellaneous applications of such power.

Our 1962 program also calls for exhibits at a number of trade shows. We hope that as many members as possible will visit our booths. These include the Design Engineering Show in Chicago starting this April 30, the American Institute of Architects exhibits in Dallas, Texas, the following week, the Accoustical Engineers Show in New York starting May 23, and the Plumbing Contractors Show in St. Louis starting June 10. Next fall we will have a display at the National Home Builders Show, to be held in Chicago. All of these exhibit booths are staffed by our own personnel.

As we have for the last seven or eight years we will also supply a judge for the international plumbing apprenticeship contest held at Purdue University each August and an instructor for the refresher courses in lead work for teachers of apprentice classes. We also supply the lead necessary for the apprentice contest and instructor courses, and prizes for the three top apprentices in lead work.

This is our L.I.A. 1962 model - except for one little detail. That detail is the engine - what makes it all run? I have repeatedly said that the core of L.I.A. activities - the engine that makes it run - is the personal technical service that we provide. While all of the advertising and promotional tools that we use carry a message to hundreds of thousands of people several times a year, it is the personal technical service that enables us to follow up with those who show a real interest and to keep abreast of what others are doing. And above all we must be and are prepared to make definite and specific recommendations on the use of lead

whenever necessary. To do less than this would be just as suicidal as it would to be wrong. I am proud that through its 34 years of existence L.I.A. has obtained and maintained the respect and confidence of industry in this respect.

And I'd like to point out that we are not afraid to follow our own recommendations. Faced with the need for more space in our office, we had to create a room in the middle of our secretarial area to house our reproduction and mailing equipment, somewhat noisy at best. We didn't want to disturb the rest of the office. The job was quickly and cleanly done by using wall panels into which 4-lb. sheet lead was laminated. Finished about a month ago, what was often called during construction "L.I.A.'s Folly" is a complete success and is built of practical materials that anyone can buy and use. We're not afraid to stick our necks out because we try to know what lead can and cannot do.

Some of our staff will report to you briefly on some of the typical services they perform. Complete reports are out of the question because of the time that would be involved and the multiplicity and complexity of the problems with which they are asked to cope.

I would like to comment briefly on one aspect of our work that is somewhat unique among association activities. That is our work in the field of lead hygiene. This is, as now constituted, a double-edged activity. On the one hand we must combat the often unfair and misleading adverse publicity lead receives because it is potentially toxic if not used correctly. On the other hand is the fact that lead as a radiation shield or noise controlling device is a public benefactor. The problems that arise in these areas may be strong deterrents to the use of lead unless people are properly educated or may contribute to the greater use of lead. I consider the work of our health and safety director as important and essential to the lead industry as any other phase of our activities.

Now, since personal services constitute the basis of all our programs and activities, I'm going to invite you to spend a little time on the 14th floor of 292 Madison Ave., New York, and to look over the shoulders of our staff to see for yourself some of the things in which they get involved from day to day.

First, my assistant, Dave Borcina, who, in addition to doing a lot of odd jobs that don't appeal to me, serves as secretary of our Pigments Committee, chairman of our Solder Committee and Welding Committee, supervises our statistical services and is our principal contact with our advertising agency, O. S. Tyson & Co., among other things. A veteran of 28 years with L.I.A. Dave.

Bob Ziegfeld has reported on what our expanded advertising and promotional activities will be in 1962 and I, for a minute or two, will attempt to justify this expanded program by reviewing the results of our smaller campaign in 1961, results that I think are outstanding.

During 1961, the Association distributed over 12,300 pieces of literature as a result of direct individual inquiries requiring nothing more than sending them the literature requested. In addition, another 2,500 inquiries were received requiring answers to specific questions or problems. This then totals almost 15,000 inquiries directly attributable to our promotional efforts.

On top of this we get an average of 15 telephone calls a day from people requesting information about lead, how best to utilize it and where they can get further information on a specific problem. Fortunately, your L.I.A. staff can more often than not provide the necessary information. When we cannot we turn to our friends in member companies who have been most helpful and cooperative.

How are these inquiries generated and what do they teach us? Let's take a few recent specific examples: First, our ad about the lead roof on the Soldiers and Sailors monument in New York City which appeared in the December, 1961, issue of "Progressive Architecture" and the December 21, 1961, issue of "Engineering News-Record." We received almost 300 inquiries from this ad, 117 from "Progressive Architecture," 96 from "Engineering News-Record" and the balance directly to us. These results certainly indicated to us that there is a latent interest in lead for roofing and certainly an area worth exploiting which we are doing this year.

Next: Battery powered vehicles. We ran an ad on the Stuart car which you heard about from Barry Stuart yesterday, in the December 21, 1961, issue of "Machine Design." The following is a letter we received from that magazine dated March 14, 1962:

> "Congratulations! The attached advertisement produced the highest readership score in the December 21, 1961 issue of MACHINE DESIGN. It was a hallmark of effective advertising in MACHINE DESIGN in 1961.
>
> Our representatives are often asked to demonstrate the combination of elements which produce high readership of advertising in MACHINE DESIGN. As an assist to those agencies and advertising managers who are seeking methods of producing more effective advertising, we are planning to produce a prestige booklet of the 17 award-winning ads in 1961.

To make up presentation pieces for each of our representatives, we need approximately 50 reprints of the attached advertisement. Do you have a supply on hand, and could you spare us a quantity for our promotion piece?

Thank you and best regards."

As for our sound attenuation and antivibration promotional efforts, we can attribute literally thousands of inquiries throughout the year, and Bruce Fader will discuss these uses more fully in a few minutes.

Now let's take another facet of our promotional efforts and that is the issuance of technical bulletins. One of these, published late last year, was our "Lead Pigments Technical Letter No. 15 - Red Lead Based Paint Systems." This was distributed to our paint list of 10,000 names and a few weeks after this primary distribution, we sent a press release to magazines whose readers we thought might be interested. We received 198 requests for this "Letter" from readers of the December, 1961, issue of "American Builder." Imagine our surprise, however, when we received 178 requests from readers of the January 24, 1962 issue of "Design News" and 139 requests as a result of its appearance in the December 18, 1961, issue of "Chemical and Engineering News." These inquiries give rise to speculation. Is the industry overlooking an area of promotion of lead anti-corrosive paints and pigments?

I could go on and on but I am sure that these few examples will indicate the success we are having with our promotion and what it can teach us for the future.

Of course, a lot of our publicity and promotion efforts will go for naught unless we have good technical data, properly presented, available for distribution. We would be prejudiced in deciding the effectiveness of our technical literature so we must rely on the judgment of those people for whom it is designed. That the judgment has been made in our favor can be cited by a few recent examples. The manager of the Education and Research Division, Eastern Department, General Adjustment Bureau, Inc., requested 1,000 copies of Lead Building Construction Bulletin No. 2, and 1,000 copies of our lead plumbing catalog currently appearing in Sweet's File for distribution, at their expense, to all of their claim adjusters. This organization provides the personnel for handling 95 per cent of the building damage claims against insurance companies. They wanted this literature for the purpose of informing their personnel as to the correct installation procedures for shower pan and plumbing connections.

Another request was for 150 copies of Lead Pigments Technical Letter No. 15 - Red Lead Based Paint Systems, received from the Maintenance of Way, New York City Transit Authority. They wanted these for distribution to their paint technicians and foremen. Similar requests for extra copies of other technical literature, such as the battery-powered industrial truck and sound attenuating brochures, also our book "Lead Work for Modern Plumbing" which has been approved as a textbook in the plumbers' apprentice training program are received almost weekly. In many instances, they are purchased from us at cost.

I mentioned the number of telephone calls we get and I am going to report on two of these that I handled this month. A gentleman in the Engineering Division of the American Can Co. called to say that he has just received a copy of our Lead Pigments Technical Letter No. 13. It called to mind that he had received some information several years ago from us on the proper installation of a lead shower pan. He was now involved in drawing up plans and specifications for a similar job and wondered if we still had available data that he could incorporate in his plans. I was of course delighted to send him our Lead Building Construction Bulletin No. 2 - Specification for Lead Shower and Safe Pans. We send out information on lead paints and we sell sheet lead for shower pans.

Another call, this one from Lakeway Chemicals, Inc., Muskegon, Mich. prompted by the receipt of our publication "Lead" resulted in keeping lead in a chemical tank. I will read his letter of acknowledgment:

> "We wish to express our sincere appreciation to you for the assistance and the literature promptly provided. Following your suggestions, we have proceeded with the necessary lead repairs. We look forward to receiving your complimentary copy of "Lead in Modern Industry" in the near future."

Another facet is our cooperation with other companies or organizations in an effort to expand markets for lead. Matt Broderick of Solvay Process reported on our joint efforts in promoting yellow traffic marking paint. Also, we are currently working with Reynolds Metals Co. in an attempt to develop lead containing aluminum paint.

All of this promotion and publicity is not a one-man job. All of my colleagues you see on this stage as well as the O.S. Tyson agency people who are represented here by Paul Higgins cooperate with me in gathering and preparing the necessary material.

And, finally, this learned group that you see before you, and I say this with a smile, was stumped a few weeks ago. Not

by an architect or engineer, a ceramist or a hygienist, or even an economist, but by a 14 year old Iowa boy who wrote us as follows:

> " I would like some traces of lead from 2,000 B.C. to present time. If there is a charge, let me know."

Thank you.

Next, I'm pleased to introduce Don Fowler, our director of health and safety since last October 1. Don was formerly head of industrial hygiene at Chrysler Corp. and before that was with the Michigan State Department of Health. His experience with lead problems and hygiene in general has been extensive.

Childhood Poisoning

One of the most insistent and frustrating problems which faces us is that of the numerous and well-publicized cases of childhood poisoning which still occur in the slum areas of our large cities.

Chicago is a good example.

We were requested to help by the City Health Commissioner and agreed to do so by serving on the Commissioner's Review Committee which meets every three months to analyze recent cases of childhood poisonings that have been reported. As you know, cases of poisoning by lead among children almost invariably occur following chewing of painted interior surfaces.

(Chicago reports 150 child poisonings per year which result in about 35 deaths, of which up to 27 have been lead poisoning deaths.)

Sometimes I wonder whether these efforts of ours are appreciated, and then comes an unexpected tribute such as happened at a national meeting sponsored by the U.S.P.H.S. in Cleveland a couple of weeks ago. A nurse employed by the State of Ohio Health Department stood up in the meeting and publicly thanked the LIA for its help in alleviating the distress caused by children's poisonings.

Smog and the Automobile

Upwards of 99% of the gasoline sold in this country for motor vehicle use contains lead compounds as additives.

We like it this way. But there are some representatives of official government agencies, particularly in California, who apparently feel that gasoline should be un-leaded. Of

course, we do not agree, and in order to make our position in this matter clear to the authorities we are cooperating with representatives of the major producers of lead gasoline additives in maintaining liaison with State and Federal authorities in air pollution and health fields.

Thus far we have been able to demonstrate that the lead in gasoline is not a contributor to smog formation and that un-leaded gasoline would not clean up the air in California, or elsewhere for that matter. However, official activity continues with studies relating the lead found in the air to that detectable in the human body. Needless to say, all such studies are being followed closely.

Study of Lead Pottery Glazes

Last year's widely reported incident of two cases of "lead poisoning" which allegedly resulted from the use of glazed dinnerware has caused the manufacturer to go out of business and the LIA to sponsor, in conjunction with the U.S. Potters Association, a study of the subject of the potential hazard in representative pieces of dinnerware.

While this may sound like a simple procedure on first consideration, we soon found that no two individuals or groups agreed even on a method for testing glazed ware, nor on the amount of lead that would be permitted if a test method was agreed on. Accordingly meetings and discussions were held with representatives of the California Health Department, Potters Association, glaze manufacturers, National Bureau of Standards, and the Kettering Laboratory (who are performing the tests) and a series of exploratory tests were started in an effort to outline the problem. The first test series has been completed and the report transmitted to all interested parties for comment and criticism. As soon as all comments are received, additional appropriate tests will be performed and a report written, but only after agreement has been reached with all interested parties.

Lead in Health Protection

While the foregoing are instances of purely defensive work that we carry on to help preserve our present market for lead, I would like to mention a couple of examples of work involving the unique qualities of lead in health protection.

Lead is the material of choice for protection against harmful radiation and our recent past experience indicates that governmental activities designed to reduce human exposure to radiation will be of increasing benefit to us in the future. Bruce and Bob Travis have each furnished information to physicians

and dentists, for example, outlining ways to use lead as shielding material to control leakage radiation from professional x-ray devices.

Another new application which takes advantage of lead's unique characteristics of mass with limpness is in the suppression of unwanted noise and vibration both in noisy factories and in other buildings such as apartments. The control of noise in factories is of especial importance in that loss of hearing is now a compensable disease in many states and we are, therefore, devoting a great deal of attention to the many problems which arise in this connection.

Here is Bruce Fader, who is largely responsible for the snappy writing and appearance to be found in "Lead" and most of our other direct mail pieces and publicity material. A former trade paper editor and public relations man, Bruce has a technical background in chemistry. In addition to his editorial work, he performs much of our technical service in the fields of noise and vibration control.

Letting you look over our shoulder to see what happens at LIA is a good deal easier than answering the question "what do you do?" Whenever I'm asked that I find it hard to give a short answer. "Technical service, industrial public relations" and other pat phrases only tell half the story.

Let me illustrate: A few weeks ago I was sitting in my office working on a manuscript. As you know, we go out and get stories for LEAD, write and edit them, work with the printer, and take care of the other odds and ends of producing and distributing a good many publications. I was interrupted by the telephone. One of the advertising people at Permacel Tape wanted to let me know that he could furnish samples of lead tape to a national meeting of the Miniature Collectors of America, a group of hobbyists devoted to producing historically authentic lead soldiers.

This unlikely communication resulted from my request to him, which, in turn, stemmed from the suggestion of a contributor to the last issue of LEAD. (You may have seen the lead soldier story on page three of that issue.) When I returned the pictures we had borrowed, I enclosed a sample of lead tape and our model maker liked it so well he suggested making a sample available to the 150 members of the hobby group at their national meeting.

Now that the arrangements have been completed we will be able to introduce a new form of lead to some of the country's top model makers. Perhaps we will thus persuade them that this is better than cutting up old toothpaste tubes as they do now. In terms of tonnage consumption we have not put it down as the year's smashing success -- but if it results in a new form of lead in leading hobby shops, it will have been worthwhile.

Before that call ended, Dave Borcina and Ed Martin were waiting to talk to me. "What effect will pentachlorphenol have on lead?" they wanted to know. "The MIT roof is to have a wood sheath under the lead and they are worried because the wood is treated with penta and there may be a corrosion problem." It's always flattering that Dave and Ed have faith that my slim stock of chemical engineering experience will produce the right answer to a question like this.

My guess was that pentachlorphenol, being a fungicide, would release a trickle of chlorine over the years, but that lead would not be affected by this. In the course of our three-way bull session, Dave suggested checking with Ray Bates at the National Lead Labs in Brooklyn. We did. He agreed. The case was closed . . . or rather opened for Ed, since he now had the job of checking and verifying our information with MIT.

Then the phone rang again . . . but I'm sure you have the idea.

What is so typical about this ten minute slice of life at LIA is that Ed, our architect, had gotten the answer to a chemical problem. My primary interests were shelved temporarily to have a plunge into the lead soldier market and to help solve Ed's problem. And that Dave was able to reach into his solid experience with lead and suggest just the man who could give us a quick answer.

If we can't boast being the best staff in the world, we can make a fair bid for being among the most versatile.

Now in the minute I've left myself, I'd like to tell you about two fields I concentrate on. One of the top priority projects right now is the publication of a promotional booklet on the use of lead-acid batteries for tools, appliances, and vehicles. We have gathered background for this and the next step will be a request for information and pictures from the fifty or so manufacturers of these we've learned of. After that we'll use some of the information in LEAD, in our ads, and we may turn up a feature story for our friends of the business press. We'll then get to work on writing up the booklet and designing it for the press -- to fit the "market" or distribution list we will have selected. Incidentally, you may be interested to know that developing such lists is another of our activities -- I don't know that we will have to single out all country clubs and golf courses for this mailing, but it is typical of the sort of minor chore we sometimes have to perform.

Our work with batteries also puts us in the field to gather information and pass it on to potential users.

In another area, that of sound and vibration control, we do much the same thing. There is no point in telling you about

the other publications, some of them in this field, which we get out. Let's talk about the visits and technical service we've provided. One case in point is the Bearing Noise Laboratory at Franklin Institute. Last fall they came to us with their problem. Critical acoustic research work had to be done in a small laboratory which was part of a bigger noisy area. They had read our literature and were convinced that lead might help. They wanted to know just what should be done. I visited Harry Rippel, the engineer in charge of the project, looked over the existing room, and, after checking with Ed Martin on the construction that appeared best, sent them some recommendations. As a result, Franklin Institute installed about a ton of four pound sheet lead to quiet the room. It has now been tested and shows excellent results.

In another case, the Shawinigan Resins Corporation became interested in producing lead-loaded plastic acoustical compounds after talking with Dave at the chemical show. After exchanging letters I visited their plant in Springfield, Mass. They are now at work on development. This was a case where Don Fowler was of great help. Their initial proposal for testing processing characteristics of powdered lead in the lab did not sound too good -- I checked with Don and, reaching into his experience with industrial hygiene, he was able to suggest a simple modification which made their work much safer.

There are many more examples of this sort of interplay between staff members which could be cited. I'm sure the point is clear. I hope, too, I've given you some idea of how we go about learning the problems of potential lead users and then doing something about them.

The next member of our staff I want to introduce is Ed Martin, member of the American Institute of Architects and responsible for our technical service to architects and the building trades. While he's been with us only a little more than a year, he has nearly 25 years of experience with some of New York's leading architectural firms as his professional background.

The middle of last month marked the anniversary of my first year as Architect for L.I.A. It was a busy year. Of course it would be impossible in four or five minutes to summarize, or even synthesize the myriad events which have occurred, problems we have counseled on, advice we have given and information provided. I say "we" because, as has been pointed out, ours is a group effort. In many cases it would be difficult to draw a line between areas of individual endeavor.

There was the experience, for example, with the tenants of a well known New York luxury apartment development who sued their landlord for breach of contract. It seems he had promised them

among other things, a "quiet, refined atmosphere". What they really got was...well, the guiding genius of the whole movement was a spinster lady of venerable vintage who insisted she could hear her next door neighbor snore at night. Now, was this a case for the Architect, the sound Engineer, or should we simply have turned it over to Dan Fowler for investigation of some absurd neurosis? Actually -- so we don't leave you hanging here -- the wall in question tested 36 db; a transmission loss so good even lead couldn't have helped much.

How might it have helped? Well, we have at the moment in manuscript form a study by Goodfriend Associates, acoustics engineers, of a number of sound attenuating assemblies which give great promise.

In our own offices on Madison Avenue we have surrounded our office boy, Tony, and his machinery -- consisting of a mailing machine, an addressograph, a stapling machine and a mimeograph (and, believe me, that little room can resound with noise when Tony gets everything rolling at once) -- we have surrounded him with a partition assembly made up of a sandwich of two sheets of gypsum board, one on either side of a one inch thick gypsum core -- and a sheet of four pound soft lead laminated under one face.

The resulting solid gypsum and lead wall, 2½" thick, will give us a TL of 42 db. This is the same as saying we are reducing the sound of a concert hall on one side of a wall to the sound level of your bedroom on the other...All of which is a rather handsome gift to be able to give the harrassed office planner faced with theproblem of shutting out city noises or, conversely, of enclosing an important executive with a blanket of privacy.

But, on this one at least, I can be a real Santa Claus since we haven't finished bestowing benefits by any means. The 2½" thickness we mentioned a moment ago can be balanced against an acoustic equivalent of 8" of solid brick masonry. This means we are saving roughly 6" of floor space for every lineal foot of partition or one half square foot per running foot. For the average executive office this would mean a saving of about fifteen square feet and, at average rentals, a saving of over $100 per year. Multiply that by the number of such offices in any one job and by the many floors high rise office construction involves today and you come up with some handsome figures costwise.

The intangibles we needn't dwell on at length, yet they are very real factors: such things as ease of shipping and handling dry panels, the elimination of several trades (the material can be handled by carpenters) we need no masons, no lathers, no plasterers with their attendant dirt and disruption.

And we finally can wrap this gift up with a beautiful, big bow because the cost, installed, will be about $25 a lineal foot as against $35 or more for metal partitions. This is a picture that looks good from any angle. And possibly for some time to come.

Again this, like the others, was a collaborative effort: We had the U.S. Gypsum "Vaughan Wall" to begin with, we had some precedent from our Cominco friends and, glory be, we had the whole office in on this one: ALL, the office staff, casual visitors, and Tony himself.

Now, up to this point, we have recited cases from two different sources. One we tracked down ourselves from the public press. The second we generated from scratch within our own office walls. For our third case we are indebted to our advertising: In "Progressive Architecture" -- Walter Beretta's job on the Soldiers and Sailors Monument. This ad prompted a Springfield Architect to come to us with a flashing and gutter problem of no mean proportions. A gutter over three feet wide and the perimeter of the building - five hundred feet, 2½ tons of lead.

One more. This on a tip from a member of the Association. A theater in Chicago with a roof planned to be of concrete panels carried on suspension cables far above the heads of future audiences. The roof finish? Lead!

And lastly, for those who like immediate results and in large doses, there is that item Bruce mentioned in passing a while back: the auditorium at M.I.T. This came to us as a sort of bonus from the present preoccupation of architects and engineers with so-called "thin shell" concrete structures. This one had some almost fantastic overtones.

To begin with, it is a dome, essentially, supported at three points about 150 feet apart. Lightweight concrete fill and insulation was placed on the roof slab. According to engineers, the heat from the rising sun in Summer creates vapor pressure sufficient to cause a bubble -- a visible bubble -- to rise on that concrete slab roof and pass with the sun across the roof to the other side where it disappears at sundown.

What this sort of thing did to the roofing, almost any roofing they tried, doesn't have to be pointed out. You will notice I said, "almost any roofing". The one exception: LEAD! A gargantuan sample, if you want to call it that, was left in place on the auditorium roof from last Summer to this Spring. It was a success and the entire roof surface is now being covered with six pound sheet lead, sixty tons of it, to be completed by Commencement time this June. This was a big one

that didn't get away.

But to finish with an even bigger one -- vast new horizons were opened before us with the letter we got from an unsung engineer in Chicago. "Dear Sirs", he said, "you people may be missing a lot, have you thought of using this material for a roof!"

Here is the youngest member of our staff, Jerry Smith, also with us for a little more than a year. Jerry came to us from Dow Chemical, now serves as secretary of our Ceramics Committee, does a lot of technical writing and technical service in ceramics and other fields, and is directly responsible for the construction of our trade show displays. Jerry.

Two facets of our service program that necessarily occupy a good percentage of our time and consideration are the trade shows and resultant inquiries. I'd like to tell you a little of what we have done in this area in the past year, and more of what we are going to do this year.

The format for each trade show we enter must be arranged many months in advance (often 6 or more) in order to determine what size booth will be needed; what will be exhibited, and how; and most importantly to solve the logistics problems.

In case some of you are not familiar with the effort that goes into the planning of our exhibit booth, I would like to give you some of the details. The first steps in planning our exhibit occur at a staff meeting after the contract to exhibit has been signed and approved.

Briefly, these are some of the details that must be attended to in order to make each show function smoothly; Exhibit Materials -- what should be exhibited, how it should be arranged, and who can furnish it, are some of the problems first encountered. Secondly, the background comes under consideration -- it must fit all booth sizes (10, 12, 15 and 20 ft. widths, for instance). It should be adaptable for all types of mounted displays, yet not look junky, and must be light and easily assembled, yet be sturdy, and it should also be colorful and have a permanent finish. Next, the booth lay-out -- what are the height restrictions; how can the exhibits be placed so as to receive maximum attention, and will an island exhibit block out another important display on the background? Crating -- background and single exhibit items must be well protected yet be easily unpacked. Shipping -- careful attention and coordination avoids late arrivals of exhibit material (much of which comes from other parts of the country). Activities assignments -- establishment of equitable hours for everyone, as shows often run 10 hours per day several days in a row. Other miscellaneous details -- travel arrangements; hotel accommodations;

labor to erect exhibit, remove crates, and place furniture; electrical fixtures; tracing of lost packages and materials delivered to the wrong booth; and many other possible difficulties must be foreseen to permit full time to be devoted to the main job, i.e., getting the Design Engineer, the Plumber, the Home Builder; the Architect, to visit our booth, chat with us, and learn how he can use lead to his best advantage.

And once the above items have been checked off for one show, the entire operation must be repeated for the next (very often two shows run so close together that these operations have to be carried out simultaneously).

Concerning inquiries, this past year the staff has processed nearly 1,000 specific inquiries generated by our trade show exhibits. Many of these demanded appreciable time to answer and nearly always required supplemental literature. A couple of interesting examples of contacts made at our booth during recent trade shows: Mr. Stuart, whose electric auto uses 650 pounds of lead in its batteries; and Shmrinigan Resins, manufacturers of leaded plastic sound barrier materials.

This year, in our continuing effort to improve the efficiency of inquiry handling, we have developed a new type of inquiry card for use during the shows. This preprinted ticket is one example of our attempt to speed up processing of show inquiries. Often when the large number of inquiries received at a show is added to the regular duties of the secretarial help, they are swamped. Now, it is a simple matter to tear off the already addressed label, moisten it, and apply it to the envelope, thus 3 hours of typing and possible clerical errors have been eliminated. Also, through several years of experimenting, the new ticket is arranged in a manner much more useful than formerly. Considerably less writing is now required of a staff member to fill out a ticket in the booth; very often at a time when visitors are waiting in line to talk with us.

I feel that this year's background for our display booths is really something to talk about. It is definitely the most versatile design yet. It can be easily shipped and comes in two crates weighing a total of only 600 pounds. There are only 8 bolts in the complete display and it can be erected in 15 minutes (assemblers average $17 per hour). The most interesting part about our background is the fact that it is protected with a leaded porcelain enamel, thus giving us six colorful and durable steel panels to point out to the Designer and Architect.

The subject of our enameled background brings up an interesting point in the field of ceramics, notably the trend to leaded porcelain enamels for architectural panels. Up to

this time lead has had by far the lion's share of the porcelain enameled aluminum market, and with proper promotion should retain its lead. But now there is also a low-firing leaded porcelain enamel for steel panels. Since these panels would have greater structural stability than aluminum, they might very well find application in areas where that material cannot and has never been able to compete. As an example, I would cite the aluminum guard rail versus the porcelain enameled steel guard rail.

An area where lead is catching both ends of a competing market is in the porcelain enameled chalkboard industry. For some time now extra low temperature lead bearing enamels have been used as the finish coat for laminated steel chalkboards. Now a competing firm is applying leaded porcelain enamel to an aluminum panel which has been laminated onto steel, with the full intention of marketing 4' x 20 ft. chalkboards throughout the country. Perhaps this competition will stimulate sales, and either way lead cannot lose. This is just one example -- others are far more important, e.g., one enameling firm showed us a list of buildings to which several hundred thousand square feet of their leaded porcelain enameled aluminum panels had been applied. Now, with the advent of extra-low firing leaded enamels for steel, we should begin to see encouraging use of that material in replacing the present lead-free enameled steel panels so popular on gas stations and other architectural applications.

And last the newest addition to our staff, Bob Travis. His background has been physics and technical writing with experience, among others, at the National Bureau of Standards, International Tel and Tel, and the Reinhold Publishing Co. Since his time with us has been so short I'm not asking him to speak, but he will do technical writing and publicity, and technical service in several fields like cable sheathing, radiation shielding, and thermo- and piezoelectrics. Please stand up, Bob.