

Generations before lead was used in anti-friction alloys, lead in the form of white-lead paint was rendering its service to man. Down through the ages, it has fought the elements in its most important work of saving the surface.



Thousands of tons of lead are used every year in the anti-frictional alloy business. When alloyed with tin and other metals this wonder metal of many uses forms a babbitt metal that ideally meets the demands of a large class of work. What is more, because it is the cheapest of any metals that could be used for this purpose, it also helps to reduce materially that all important item—cost.

FR I C T I O N

Man's friend . . . and enemy

THERE'S a fight going on in this picture. The man is winning, but at a terrific expenditure of physical energy. Every time he tugs and pulls, friction does its best to hold back the runners of his improvised carrier. Friction was one of primitive man's worst enemies.

Today man has taught friction its place, has made it his friend. Not only does friction, by transmitting power, help to transport you from place to place, but by means of pulleys, belts, and friction clutches it enables you to do a thousand and one other things.

Yet even today, friction in the wrong place is man's enemy. The strategy of machinery is to increase friction at one point and minimize it at another. The points at which friction is not desired are those where parts should slide or rotate. These are known as bearings.

How man fights friction

A little tallow in the hubs of the old carriage wheels stopped the creaking and lightened Dobbin's task. Later, petroleum oils made lubrication simpler, more effective. But with the increasing complexity of machine parts, other bearing problems besides simple lubrication arose. A shaft slightly out of true plays havoc in a high-speed machine. Bearing surfaces must be a little tolerant. In 1839,

How lead helps to control it

Isaac B. Babbitt of Boston, Mass., invented a metal alloy which, when cast into bearings, would not only resist high pressures and the wear of rapidly rotating shafts, but would also conform to the play of a shaft without breaking.

From his first formula, many different types of bearing metals or babbitts (as this type of bearing metals have come to be called) have been developed to serve different purposes in industry.

Lead is an important metal in the anti-frictional alloy business, and thousands of tons of it are used every year. When combined with tin and other metals it meets the demands of a large class of work where the highest-grade tin-base metal is not necessary, and thereby helps to reduce costs.

Dutch Boy babbitt metals

A complete line of babbitt metals is made under the well-known Dutch Boy trade-mark. These metals are expertly designed to perform every type of service.

Dutch Boy Phoenix Metal, for example, is designed for high speeds and severe duties. It is the ultimate in babbitt metals and can be used in almost

any place where a bearing metal is needed. Dutch Boy Heavy Pressure Metal is similar to Phoenix but is harder and tougher. It is designed particularly for heavy pressures and poundings. Then there is Dutch Boy Genuine Babbitt Metal, made according to Isaac Babbitt's original formula. And for all general work, especially mill work, Dutch Boy Perfection Anti-Friction Metal (lead-containing) is admirably adapted.

If you want to know more about these babbitt metals or have need for special alloys for special purposes, write to our nearest branch.

Other Dutch Boy products

THE most famous of Dutch Boy products is white-lead for paint. For generations, this standard paint material has protected the nation's homes.

In addition, under the Dutch Boy brand, National Lead Company produces red-lead, linseed oil, flaring oil and solder. This company also makes practically every form of lead product used by man today.

For information about any of these uses of lead, write to our nearest branch.

NATIONAL LEAD COMPANY

New York, 111 Broadway; Boston, 131 State St.; Buffalo, 110 Oak St.; Chicago, 900 West 18th St.; Cincinnati, 650 Cincinnati Ave.; Cleveland, 820 West Superior Ave.; St. Louis, 722 Chestnut St.; San Francisco, 65 California St.; Pittsburgh, National Lead and Oil Co. of Pa., 514 Fourth Avenue; Philadelphia, John T. Lewis & Sons, Co., 437 Chestnut St.



The Dutch Boy Painter has become the standard of beauty and protection. He insures confidence in every one he serves.

Save the paper and you save money.