

ST. JOSEPH EVENING HERALD

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Enterprising Citizenship.

An instance of public spiritedness and good citizenship is shown by one of Detroit's leading manufacturing concerns which might be well commended to some of the local institutions of this city, in connection with the efforts to boost St. Joseph.

The instance referred to is that of Acme White Lead and Color Works, Detroit, who last year spent \$1,000 for advertising and expect to approximate the same amount this year.

In every place of advertising that they carried in magazines or mail circulars is contained the Slogan "In Detroit—Life is Worth Living." The originators of this idea of extending the name of their city have encouraged others to adopt the same phrase, with the result that Detroit in this way is being advertised all round the world.

This is an interesting evidence of real public spiritedness on the part of a large manufacturing concern, and why can't we start something of the same kind at home?

THIS BEATS THE DUTCH

Old Method of White Lead Making Revolutionized by Detroit Concern.

So old that it is moss grown, is the saying. "It beats the Dutch," and yet the Acme White Lead & Color works has actually done this by the perfection of a process invented by W. H. Rowley by which white lead is made a finished product in from seven to eight days including the drying as against 120 to 125 days by the old Dutch process in vogue for hundreds of years.

This meant the erection of a \$100,000 reinforced concrete building as an addition to the plant of the Acme, a separate establishment devoted entirely to this new industry with especially designed machinery and apparatus. The plant is finished and so is the experiment. At the rate of 10,000 tons of the purest of white lead a year is now being turned out, and it is not touched by a human hand from the time the pig of lead is dropped into the furnace on the top floor until the product has in its various stages of development, dropped to the basement and been pumped again to the second floor, finished.

The Old Way.

In the old process in vogue until this was changed, the metallic lead was cast into perforated discs. These discs were packed into earthen pots or retorts, flooded with acetic acid. About 15 pounds of lead was put into each pot. These pots were arranged in layers piled one upon the other with boards between each layer, and each layer resting on several inches of ground tan bark, which was also placed around the edges of the pots, which were allowed to remain buried in tan bark for from 90 to 125 days while chemical action caused by the heat of the fermenting tan bark and the acid slowly converted the metallic lead into the white lead used for paint. The corrosion was never complete and anywhere from 15 to 25 per cent of the metallic lead only was converted into the finished product. Being hard and brittle it was ground and then floated and pumped to the drying pans of copper. It necessitated the employment of 40 men for every stack of pots. It is by force of contrast the full significance of the new or "mild process" is brought home, and it is then realized that the Detroit plant will revolutionize the manufacture of white lead the world over. To Detroit, and to the Acme interests in due the credit of making one of the greatest scientific discoveries of the age practicable.

Steam, Water and Gas.

In the new process as operated at the new Acme plant nothing but steam, water and carbon dioxide gas are used, resulting in bringing to the drying pans, a finished product, 125 pounds of white lead for every 100 pounds of metallic lead placed in the starting furnace. During every ten hours the plant is in operation 100,000 pounds of metallic lead is melted, passing from the bottom of the furnace into a very hot, steam filled tank, where it becomes a soft blue substance, as thin as thin mud, and in this state very susceptible to chemical change. From there it goes to large metallic drying cylinders where it is kept continuously agitated with water in

Made into White Lead.

In the last cylinders the basic hydroxides of lead, as they are called, in the presence of a considerable amount of water are subjected to a current of carbon dioxide gas, which in less than two hours converts the hydroxides into white lead, which, containing no impurities, is ready to pump into the drying pans without any washing or separating whatever. The finished product of purest white lead was seen lying in the drying beds of canvas stretched upon coils of wires with shallow pans beneath to catch the gravity and machinery. The fact of the lead being free from impurities renders the expensive copper drying pans unnecessary. The finished product never grows hard and that part destined for commercial use is passed on to the grinding mill where it is mixed with oil into the paint form seen in the cans when bought from the hardware stores.

No Alkalis Nor Tan Bark.

In the new process no alkalis nor tan bark are required. Twelve men tend the entire plant for 24 hour runs, and everything is done by gravity and machinery. In its perfect condition the product is pumped everywhere, and thus a minimum amount of labor is required. Mr. Rowley not only invented the process, which is covered by broad patents, but also the machinery by which the white lead is made. No pots are required, no lumber is necessary. There is not a particle of the lead lost. Everything drains into cylinders in the basement and as the same water is used over and over again, the slight metallic residue that may go to the bottom is run through the process again and fully utilized.

"All of this being under water," said Dr. C. D. Folley, the chemist of the establishment during a trip through the plant yesterday, "there is absolutely no danger of lead poisoning. Each stage of the process is under full control, the full chemical increase is obtained and the process produces a uniform article without impurities of any kind. This process requires no acids, tan bark, or parts and takes but two or three days before it goes to the drying pans where it remains five days, as against from 90 to 125 days by the old Dutch process, exclusive of the drying which of course is five days. In the Dutch process only double refined lead can be used. In this process any good grade of lead is used. After melting the lead is atomized into an impalpable powder and this atomized lead, as you see distributed by pumps and gravity."

A Fireproof Building.

The building is of reinforced concrete and steel, three stories in height, light, airy and sanitary, and no man engaged in the manufacture has any hard labor or heavy lifting. Thus the Acme saves immense sums in equipment, in maintenance and in labor and gets 100 pounds of white lead for every 100 pounds of metallic lead put in the furnace. The carbon dioxide gas is made from coke. The heat furnishes the steam for the atomizing and for the running of the entire plant. The gas passes through a tower of water saturated with chemical preparation so that all sulphur and other impurities are removed and the gas passed to the carbonating cylinders absolutely pure.

In all its appointments the plant is modern and well managed. Mr. Rowley, the Acme's chief engineer, is proud of the achievement and that in addition to doing an unlimited field of enterprise, they have also given Detroit something worth having.

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