

HOW THE LEAD PENCIL IS MADE

Graphite First Used In Manufacture 350 Years Ago

Metallic lead was first used in pencils for making black marks on paper. For that reason they were called lead pencils and the name retained to this day is the same, although all "lead" pencils now are made from graphite or plumbago, a form of carbon found in the earth and having nothing to do with lead.

Graphite was first used for this purpose about three and a half centuries ago. The graphite obtained from British mines was so pure that it gave fairly satisfactory results in writing, without any special preparation; all that was necessary was to cut it out into sticks of the proper size and increase the sticks in wood to protect them. For a long time therefore the British nearly monopolized the pencil business of the world.

In 1761 the manufacture of pencils was started in Germany. The industry grew rapidly until within a short time the Nuremberg district became the world's greatest pencil-producing center. Generation after generation, the descendants of Caspar Faber, the pioneer in the German pencil industry, have continued in the pencil business.

Shortly before the American Civil war a great-grandson, Eberhard Faber, emigrated to this country where he soon set up in the pencil-manufacturing business. Since that time a number of other pencil factories have been established and American-made pencils supply a large part of the world's demand.

Graphite as it comes from the mines usually contains impurities such as iron oxides, silicates, etc. These have to be removed before it can be worked up into pencils as they would make the finished product gritty and "scratchy". Graphite occurs rather abundantly in the earth's crust but much of it contains too many impurities for use in pencils; that from mines in Mexico, Bohemia, Ceylon and Siberia is considered the best.

The mineral as it comes from the mines is sorted over and the coarser impurities are taken out by hand. It is then reduced to a powder by machines specially designed for that work and then poured into tubs containing water. The heavy impurities sink to the bottom while the lighter graphite remains at the top where it can be easily taken off. Centrifugal machines are sometimes used for separating the graphite from other substances in the ore but the results are not as good as those obtained with water. The final step in preparing the material is to pass it through filter presses.

It is then mixed by machinery with clay that has been refined by similar treatment. The clay is used for "tempering," the greater the proportion of clay the harder the finished "leads" and the smaller the proportion the softer.

The graphite-clay mixture, when well kneaded together, is molded into leaves and placed, while still plastic, in hydraulic presses. It is forced out the presses through dies of the size and shape necessary to produce the kind of lead desired. These dies are made of emerald, sapphire or other hard minerals because softer materials would wear away too rapidly.

As the plastic mixture comes forth in a continuous string it is cut to required lengths, ordinarily about seven inches. Compression in this process materially affects the quality of the lead, that subjected to the highest pressures writing best and giving the most satisfactory all-around service.

Finally the sticks of lead are baked in furnaces. They are then ready to be given their wooden cases which protect them against breakage and provide a convenient grip for the writer's fingers.

Red cedar has been found the best wood for pencils because it is close-grained, whittles easily and is capable of a high polish. After being cut into slabs about seven inches long, two and a half inches wide and a quarter inch thick the wood is placed in kilns

to remove excess moisture and resin. The slabs when properly dried are fed into machines which automatically cut six semicircular grooves in one side of each.

A stick of lead is placed in each groove of a slab and another slab, with glue brushed over its grooved surface is laid on so that the six leads are covered above and below with wood. The next operation is performed by a machine that cuts the pencils out—six from each block—and works them into the shape desired, round, triangular, hexagonal, etc. A sanding machine then rubs their surfaces down smooth. Some of the cheaper kinds are given no further finish. The better ones, however, are coated with varnish, plain or colored.

In one of the varnishing processes most generally used the pencils pass one at a time through apertures in a machine which automatically gives a coat of varnish to each as it goes through. After the first coat has dried sufficiently the pencils are fed through the machines several more times, being allowed to dry between coats, until the desired finish has been obtained.

The more expensive ones get 10 or more such coats. In another machine-varnishing process the pencils, held in a frame, are immersed in a pan of varnish and then slowly drawn out and dried. For the finest finishes a final hand polishing is given the pencils.

A machine now sands off the ends to remove the varnish that has dried there and sharp knives trim them smoothly. Gold or silver letters may be stamped on by laying on each pencil a narrow strip of gold or silver leaf and then bringing it under a heated steel die which makes the leaf stick to the pencil under the letters on the die. By means of inked dies letters may be printed much the same as on paper, etc.

In the big factories the rubber tips used for erasing are made in great numbers, along with large separate erasers, rubber bands and the like. Eraser rubber, consisting of gum rubber, sulphur and abrasive material, properly cured and vulcanized, is either molded or cut into the form of plugs of the required shape and size.

Surgeons agree that in cases of cuts, burns, bruises and wounds the first treatment is most important. When an efficient antiseptic is applied promptly, there is no danger of infection and the wound begins to heal at once. For use on man or beast, Borozone is the ideal antiseptic and healing agent. Buy it now and be ready for an emergency. Price 25c, 50c, \$1.00 and \$1.50. Sold by Ohio County Drug Company.

CRAPSHOOTER WINS FROM TEXAS JUDGE

Dallas, Tex., March 13.—George Washington Jackson Smith, a young negro, appeared in Justice Court here, charged with participating in a dice game. He told Sam J. Barnett, justice of the peace, that negroes liked to toy "with those bright-eyed ping-pong balls just as much as you like to eat," and he pulled from his pocket a pair of black dice with red "eyes" and proceeded to show the justice how to play the game.

"I will sentence you to pay a fine of \$100," said Judge Barnett, "but I will give you a chance to get yourself out. Here are ten matches. I will keep eight and give you two, each representing \$10. Now try your luck and see whether you go to jail or go free."

George Washington Jackson Smith "tried his luck." In the language of the game, he spoke feelingly to the fateful dice. Soon the grinning negro had the judge's eight matches.

"If you all will give me a cigarette I will be on mah way," he said with emphasis. "I 'speak as how my wife is waiting for me, for I ain't been home since I left for church last Sunday mornin'."

UNEARTH PETRIFIED TUSK OF MASTODON IN KANSAS

Stockton, Kan., March 12.—The petrified core of a mastodon's tusk was unearthed near here the other day by workmen putting in abutments of a bridge. The tusk is five inches in diameter at the base and two feet in length.

It is believed the tusk is part of the skeleton of a large prehistoric animal that made its home in the primeval forests of the Solomon Valley, thousands of years ago.

Catarrhal Deafness Cannot Be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure catarrhal deafness, and that is by a constitutional remedy. Catarrhal Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or impaired hearing, and when it is entirely closed, deafness is the result. Unless the inflammation can be reduced and the tube restored to its normal condition, hearing will be destroyed forever. Many cases of deafness are caused by catarrh, which is cured by Hall's Catarrh Medicine, which is restored to its normal condition, hearing will be destroyed forever. Many cases of deafness are caused by catarrh, which is cured by Hall's Catarrh Medicine, which is restored to its normal condition, hearing will be destroyed forever. Many cases of deafness are caused by catarrh, which is cured by Hall's Catarrh Medicine, which is restored to its normal condition, hearing will be destroyed forever.

PALESTINE TO COPY AMERICAN CITIES

U. S. Towns To Be Duplicated On Desert Sands Of Holy Land

Boston, March 13.—Future cities and towns in Palestine will be replicas of localities in the United States, according to messages received from all parts of the country by the New England Zionist Bureau. American architectural beauties, street layouts and parks will be miniaturized in the Holy Land of the Jews.

The first city to be established in Palestine will be Lynn, named after the Massachusetts shoe city. More than \$100,000 worth of land certificates have been purchased by the city's Jewry. The Lynn emigrants say they will make every possible attempt to reprint the city of Lynn on the sands of the Palestine desert.

The exodus of Boston Jews to Palestine, which is expected to reach its peak in the late summer, will mean that a new Boston will be founded to the Palestine coast. Maps of Boston will be reproduced in the Holy Land as far as advisable, Mendell Fisher, of the Zionist bureau, said.

Telegrams reveal that there will be a New York, Chicago, San Francisco and Philadelphia in the Holy Land.

"If we can duplicate American cities in Palestine," said Mr. Fisher, "it will mean that a good many more Jews will leave this country for their own land. When it is seen that the hardships are over, that we have trolley cars in the Palestine cities, modern buildings rivaling those in this country, communal societies which are anxious for the welfare of the people then we'll have a general emigration across the seas."

"Probably 30,000 Jews of the United States would leave this country as soon as Britain lifts the restrictions. The United States Jews, because of their advanced culture and financial backing, would be able to name the majority of the cities after American names. Already maintenance and development work has been started in Palestine in ten branches."

ADMINISTRATOR'S NOTICE.

All persons having claims against the estate of the late T. E. Hunley, are hereby notified to present same to me, properly proven, on or before May 1st, 1920, or they will be forever barred.

This March 5, 1920.
N. G. HUNLEY, Adm'r.
3613p T. E. Hunley, deceased.

ARMISTICE DAY CASUALTIES

The adjutant-general's office has reported that the total casualties among the American forces on armistice day, Nov. 11, 1918, amounted to 3,912. Of this number 268 were killed in action, 2,769 wounded severely, 466 wounded slightly, 177 gassed slightly, 216 wounded, degree undetermined, and 16 gassed, degree undetermined. The largest number killed was in the 88th division. Some objectors have argued that it was an unnecessary sacrifice of life and limb to continue fighting on the last day, when it was pretty certain that hostilities would cease. But the Huns might have only been playing a trick, and it would have been the height of folly to relax the operations against them. The fighting, if anything, should have been continued until peace was made in Berlin. The Huns tricked the allies as it was.

Herbine cures constipation and re-establishes regular bowel movements. Price 60c. Sold by Ohio County Drug Company.

BOY BREAKS BOTH LEGS WHILE TURNING IN BED

Sullivan, Ind., March 13.—Leo Pinkston, 15, broke both legs while attempting to turn over in bed. The lad, a son of Mr. and Mrs. Richard Pinkston, has been confined to his bed for more than three months with a malady affecting the bones of his legs. Physicians said the bones were brittle as chalk because of a lack of phosphorus. So, when Leo tired of one position and attempted to change, the legs snapped. The broken bones were set and the doctors are awaiting with interest to see if they will knit.

Children Cry FOR FLETCHER'S CASTOR OIL MACHINE SLIPPED COG.

Julius Cutler was tickled nearly to death. A kind-hearted stranger who had happened along had given him a secret for making money at a more rapid rate than he had ever dreamed of before. He had just invented a marvelous new money-making ma-

chine, the affable fellow had explained. This, by a simple operation, would transform \$1 bills into \$2.

Then he had demonstrated his invention, showing how \$1 bills were fed in at one place and how they would come out at another, clean, perfect \$2 bills.

Cutler was more convinced. He was so enthusiastic that when the stranger offered to convert ones into twos for him on commission, he agreed to the proposition and rushed off to find his friend Benjamin Schonbrum. He breathlessly explained the scheme to the latter and it sounded so good to him that he decided to have his \$900 capital doubled by having it run through the machine.

Cutler dug up his savings of \$100 and together they repaired to the meeting place appointed by the inventor. The money was immediat-

turned over to the latter and he fed it into the machine. Then he handed them a package of crisp \$2 bills—that is, it seemed to be, with good, clean currency showing at top and bottom—and cautioned them that the package should be kept in a safe over night in order that the ink might dry properly.

Cutler and Schonbrum carried the new money off and carefully tucked it away in a safe, as per instructions. The following morning they opened the package with trembling fingers. Both almost fainted for they found only a few \$2 bills in the lot and these, by some strange chance, were placed half of them at the top and half of them at the bottom of the pile. Sandwiched between the real money was a lot of old newspaper, clipped to the exact size of paper currency.

Schonbrum looked at Cutler and Cutler looked at Schonbrum, neither

quite able to make up his mind whether something had gone wrong with the machine while it was working on their money or whether they had fooled some way in drying the ink.

They know now that they were neatly done out of \$1000 but they don't figure it as a total loss, realizing that the experience is worth a great deal.—The Pathfinder.

Has Had Stomach Trouble For Seven Years.

Theodore Sanford, of Farmington, Mich., has had stomach trouble for seven years and could not eat vegetables or fruit without pain in the stomach and restless nights. By taking Chamberlain's Tablets he is now able to eat vegetables or fruit without causing pain or sleeplessness. He is troubled with indigestion or constipation give these tablets a trial. They are certain to prove beneficial.



Give Me a Friendly, Natural Hand-shake

an' a friendly natural tobacco. Keep yo' put-on airs an' "sauce-up" tobaccos for the fellow that likes nut sunnaes better than home made pie—

So says a friend of ours named Velvet Joe. And he just about hits the nail on the head.

Velvet is made for men who think there's no smoke like real tobacco. If you are that sort of man, listen:

Velvet was born in old Kentucky, where more than one good thing comes from. It was raised as carefully as any other Kentucky thoroughbred. But the real secret of Velvet's friendly qualities is its slow natural ageing in wooden hogsheads. Ageing in the wood never hurt anything—and least of all, tobacco.

And so we say, Velvet is good tobacco—nothing more or less. It runs second to none.

The picture of the pipe on the tin needn't keep you from rolling a jim-dandy cigarette with Velvet.

Liggett & Myers Tobacco Co.



Actual Size

-the friendly tobacco

INFLUENZA starts with a Cold

Kill the Cold. At the first sneeze take



Standard cold remedy for 20 years—in tablet form—safe, sure, no opiates—breaks up a cold in 24 hours—relieves grip in 3 days. Money back if it fails. The genuine box has a Red Lion with Mr. Hill's picture. At All Drug Stores