

## AN ARSENIC MINE.

### Method of Obtaining the Deadly Drug.

#### Its Production is Not Unhealthy to the Miners.

Many points of interest are brought out in a description in a technical journal of the way in which arsenic is obtained from one of the most famous mines in England, the Devon Great Consols. The mine was originally worked for copper alone, and would have been abandoned but for the discovery that the waste thrown out as worthless when copper was sought proved rich in arsenic. Although copper is still raised, it is in small quantities, and the mine has been resolved into an arsenic works. The arsenical pyrites consist of 25 to 30 per cent. iron, 12 1/2 to 14 per cent. of arsenic, and the rest of earthy matter. After being crushed this is sorted by girls of from 13 to 16 years of age. It is then washed and "jigged," or sifted, and passed on to the first calciner, where it is burned with low class coal, and produces "arsenic soot" so mixed with smoke soot from the coal as to be a gray color.

The arsenic and soot, deposited in combination in the chimney or condenser, are scraped out and taken to the second calciner for purification. The calciners consist of revolving iron drums, through which a fire of anthracite coal is carried on rotating iron furnaces kept red hot. As the arsenic soot is subjected to the influence of this heat the arsenic is sublimed and condensed. This operation has to be carefully watched, and if the workmen burn the arsenic badly they have to pay for it. Three men in four weeks will make 100 tons of arsenic. The chimney in which the arsenic is condensed is a mile long. It is carried to an incline up a hill, with iron doors in the side. As the hot blast passes upwards it deposits a crust of arsenic crystals on the brick work all around to a depth of from two to three inches, and minute dust of crystals fall to the floor. The smoke has then to pass into an upright chimney 125 feet high, but just before doing so it has to traverse a shower of water, which catches what remains of the arsenic, nothing but sulphurous acid being allowed to escape.

The arsenic is liable to produce sores if permitted to lodge in wrinkles and folds of the flesh, or about the mouth and nostrils. As a rule, however, this only happens where there is carelessness as to personal cleanliness, and the arsenic workers simply have to wash themselves thoroughly every day on returning from work. Otherwise the work is considered healthy. It prevents all eczema, and the fumes of sulphuric acid, as well as the arsenical dust, are fatal to germs of disease. Most workmen remain at the works for a number of years without suffering, but occasionally the symptoms of arsenical poisoning, loss of appetite, nausea, frontal headache and anaemia declare themselves. When this takes place the work has to be given up entirely. The greatest danger to which the workmen are exposed is met when it is necessary for any purpose to enter the upright shaft. The effect on the eyes is most painful, and a further curious evidence of the virulence of the pervading atmosphere becomes manifest. The men wear linen garments, lined with flannel, and the sulphuric acid fumes completely destroy the linen in a few moments, leaving the flannel intact, so that the men go into the shaft in linen and come out clad in wool. Fortunately it is seldom necessary to enter the shaft, or great loss of sight would ensue.—*Montreal Star*.

#### Fighting Power of the Chinese.

The fighting power of Chinese militia, when armed with modern weapons, is evidenced by the frequent repulses and defeats which the French suffered during the campaign in Tonquin, the last being that of General Negrien near Lang-Son, nine days before the Franco-Chinese treaty of peace was signed, and when the French army of occupation in Tonquin had been raised to 40,000 men. The Chinese troops were merely levies from Yunnan, Kuang-tang and Kuang-si, and not part of the 150,000 who had been trained by European officers in China.

The total army of China at that time, including 600,000 militia known as the Green Flag Army, scattered through the various provinces, was said to be about 1,000,000 men. In time of necessity this force could be largely increased. The following quotation from an author who had experience with General Gordon's "Ever-Victorious Army" shows that Chinese are admirably suited for soldiers:

"The old notion is pretty well got rid of that they are at all cowardly people, when properly paid and efficiently led; while the regularity and order of their habits, which dispose them to peace in ordinary times, give place to a daring bordering upon recklessness in time of war. Their intelligence and capacity for remembering facts make them well fitted for use in modern warfare, as does also the coolness and calmness of their disposition.

"Physically, they are, on the average, not so strong as Europeans, but considerably more so than most of the other races of the East, and on a cheap diet of rice, vegetables, salt fish and pork they can go through a vast amount of fatigue, whether in a temperate climate or a tropical one, where Europeans are ill-fitted for exertion. Their wants are few; they have no caste prejudices, and hardly any appetite for intoxicating liquors."—*Nineteenth Century*.

#### The Care of a St. Bernard.

A St. Bernard puppy should never be taken away from his mother until he is six weeks old, and only then if healthy. A few days before the puppy is taken from his mother he should be given daily a little hominy made thin, or some of the patent pepsinated puppy food, given according to the directions which accompany the biscuit. This food prepares the puppy's delicate digestive organs for the most trying ordeal of his life, the severance from natural to artificial diet. A puppy should lap the hominy or puppy food, whichever is selected, of his own free will and never be fed with a spoon.

When the puppy can feed himself he should have placed before him a bowl of milk, which should be boiled and allowed to cool to the temperature of blood. Great and sudden changes should be avoided. Milk is the most food for newly weaned puppies that can be given, and as it is advisable to give them, if possible, the same cow's milk, which is not obtainable always, I have found that condensed milk, keeping to the same brand, is the most desirable. As puppies grow older scalded bread, thoroughly boiled oatmeal and puppy dog cakes, made to a pulp, two of the necessary six meals a day that they crave. From six to twelve weeks their other meals may consist of the same solid materials, substituting bread in the place of milk. The more variety a pup can have the better.—*Ladies Home Journal*.

#### A Study of Heads.

In San Francisco calipers and 1 tape lines play an important part in the curriculum of the public schools. One of the principals has evolved a system of measurements, which he considers important in determining the physical status of the child for the purpose of developing what is deficient. He makes a good deal of head measurements, which he bases on the accepted theory the intellectual powers reside in the front half, the vital and emotional in the rear; that a high head between the ears indicates activity, and width between the ears end combativeness.

When a child stands up to have his brain measured a tape line goes first around his head. Twenty-four children of 10 years of age have heads ranging in circumference from 19 to 21 1/2 inches; the straight distance between foreheads and occipital bones range between 12 and 14 inches, and the distances over from ear to ear between 12 and 13 1/2.

#### Red Tape Wax.

The different important British State documents are sealed with different varieties of wax, according to the office from which they emanate. For instance, the wax used for the Great Seal of England is whitish in color, and is compounded of oils and balsams, from a recipe kept in the Lord Chancellor's office. The wax of the Great Seal and Privy Seal of Scotland, manufactured by an Edinburgh firm, is a compound of resin and beeswax, colored with vermilion, which is a bright red sulphide of mercury. The Exchequer Seal is made of green wax, and is considerably softer than ordinary sealing-wax.—*New York Dispatch*.

#### Felling Trees by Electricity.

A novel departure in electrical science is reported by the scientific journals. Trees are now to be felled by electricity. The modus operandi is as follows: A platinum wire, having been stretched out between two poles, is heated until it becomes incandescent. It is then drawn tight against the tree, through which it immediately proceeds to burn its way. It is said that a tree can by this process be felled in about one eighth of the time it would take to saw it down. The new method should also be considerably safer for the operators.—*Chicago Herald*.

## SHOES OF WOOD.

### A Unique Cobbler in New York's French Quarter.

#### How He Makes Sabots For His Countrymen.

In the heart of the French quarter, where South Fifth avenue loses the provincial tone given to it by Washington Square and becomes more like a Paris slum, dwells a shoemaker who has not his like in New York city and possibly in the United States. His is the only branch of the trade which has not succumbed to the machine-made process, and, as he is the only one of his kind, he enjoys a monopoly.

The sign which proclaims his calling is nailed under his workshop window, and is unique in its way. It looks something like a flattened-out brogan, and on it is painted the legend, "Fabrique de Sabots." On the window-sill, above the sign, are displayed his wares; heavy-looking, clog-shapen arrangements which remind one of the coverings on the feet of the figures in Millet's "Angelus."

Inside the shop the proprietor, Julius Hourtoul, successor to Peter his father, can be seen working away with the strangest shoemaking tools ever used in New York. He is a young man, and talks volubly in French of his art. And high art it is, sculpturing moulds for the feet out of solid blocks of marble.

Sabot and sabot-making are large necessities in rural France, but here in New York they seem odd and get more amusing when seen and told about. Sabots are used very often on the stage, and it is from this source that Hourtoul derives his largest revenue. Yet sabots are used also to some extent among French laborers in the city, and at times the clasp of their heavy bodies can be heard even in South Fifth avenue and Bleecker street.

The sabot proper is made of wood, carved from the solid block, but so expert are the makers that to the foot they are as soft as a patent-leather pump. Hourtoul at work uses something like an immense spoke shave, loosely secured at one end to give leverage. This is for the outside. For the inside he uses what looks like an immense cheese scoop. He will take the measure of the daintiest foot and with his primitive tools carve out a covering which is guaranteed to raise no corns and to thoroughly retard the growth of bunions.

Hourtoul, in a broken patois, will tell you that times are dull in the shoe trade. He was born in France. He says he is the only one in the United States who makes sabots. His private customers are, of course, taken mostly from the French residents here, but he gets a fair sprinkling from among the Italians.

Hourtoul manufactures leather sabots with wooden soles, but, oddly enough, these are not considered high toned by the sabot wearers. The all-wood affairs are considered the proper thing, and even these have their grades of excellence. Those who want to have respectable foot coverings have maplewood put into their sabots, but the real swell affairs are made of walnut.

Italian laborers use the leather variety which are really brogans with wooden soles. They cost \$1.50. The all-wood styles are worth \$2. A good pair will last all of six months and sometimes longer.

Outside the roar of the elevated trains disturbs the peacefulness of the little French shoe-shop where the sabots are made, but not more, perhaps, than did these same sabots years ago in France, in revolutionary times, when their ceaseless tread, so wonderfully described by Dickens, disturbed the peace of the old mansion in "A Tale of Two Cities."—*New York World*.

#### The Braz'lan Saracuca.

The Brazilian Saracuca is a reptile that reaches a length, it is said, of twelve feet, and that for beauty, agility, savageness, and venom is excelled by none in Brazil. The old Dutch settlers gave it the name of the "Bush-master," a title it well deserves. The beautiful glints of light on this reptile's scales excel those on a humming bird's breast. It is of a reddish-brown color, with varied markings. It fortunately is chiefly nocturnal, and only frequents dense woods, as a rule not coming near houses.

The finest specimen I ever saw was about eight feet long, and had six fully-developed fangs—three on each side—as well as eighteen in various stages of growth—nine on each side. It was a pleasure to dissect this fine snake. The front fang was one inch and three-quarters long, exclusive of

the bony base. The effect of a lunge from such a serpent can well be imagined. This is called "Saracuca," as it is said to make a hooting noise at night; and "de Fogo" as it is said to approach a light at night and try to get as close as it can.

I has a curved claw on its tail, which the natives say it uses to dig into the ground as a fulcrum for its leap on its victim. This requires corroboration. The natives have a great dread of it, as well they may, it being the most deadly-looking reptile here, the size of the poison sacs being so great, as well as its own size, agility, and proved savageness. It seems to feed on wild pigs, "paca"—a large rodent like a guinea pig—deer, and other animals.—*Chamber's Journal*.

#### Medicinal Value of Apples.

"The medicinal value of apples is not half appreciated," said Dr. J. L. Selkirk. "To men of sedentary habits whose livers are sluggish, the acids of the apple serve to eliminate from the body noxious matters, which, if retained, would make the brain heavy and dull, or bring about jaundice, skin eruptions and kindred evils. The malic acid of ripe apples, raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also true that such ripe food as the apple, pear and plum, taken without sugar, diminish acidity of the stomach rather than provoke it, as is erroneously supposed. Their juices are converted into alkaline carbonate, which tend to counteract acidity."—*Globe-Democrat*.

#### Case of Suspended Animation.

"I saw a very interesting case of suspended animation the other day," said an Allegheny man to an east end physician.

The latter was deeply interested at once.

"Ah!" he replied. "Go on." "A couple of boys on our street had captured two cats. They tied them on either end of a short rope, and threw the rope over a clothesline. I tell you the suspension was animated for a few minutes, until I managed to cut the rope."

At this point the doctor said he had a patient to visit.—*Pittsburg Chronicle Telegraph*.

#### New Fibre for Textiles.

Very handsome fabrics are now being made from a fibre that is prepared from the bark of the mulberry-tree. An Australian factory has been running on this material for the past five years, and so satisfactory are the products that an extensive plant is projected. It is claimed for this material that it has almost ten times the strength of ordinary cotton and that the dyes are much more permanent than in the majority of such goods. It is used for decorative purposes, draperies and upholstery, and some surpassingly handsome damasks have been made from it.—*New York Ledger*.

#### Wheat Not Easily Frostbitten.

Growing wheat is a vegetable that is not readily affected by a nipping frost. In fact, it is a hardy plant, and thrives when the temperature is several degrees below the freezing point. When only three or four inches high a snow and the mercury fifteen degrees or thereabouts above zero for a day or two does not kill it. When the stem has reached six or more inches and becomes jointed it is more susceptible to the cold, and a blizzard is likely to work damage, but even then only in patches.—*Chicago Herald*.

#### Where the Danger Lay.

Mrs. Leo Hunter (with a little preliminary shiver)—Oh, I am sure, I can't see how you can be so composed after all you have been through! It must have been dreadfully dangerous down there at that horrid Rio Janeiro during that awful revolution!

Capt. Mainbrace, U. S. N.—I should say it was dangerous!—yellow fever liable to break out any time!—Puck.

#### Hungry For Information.

The City Girl (summing in the country)—Oh, dear, what a cunning little animal!

The Farmer—Yessum. It's a yearling.

The City Girl (with interest)—Indeed? And—er—how old is it?—*Chicago Record*.

#### The Beginning of Knowledge.

Calloe—Women have mighty queer ways, don't you think, Uncle Si?

Uncle Si—I kaint say that I know much about women. I only been married four times.—*Indianapolis Journal*.

The "Irish potato" grows wild in the mountains of Chile and Peru, where it is undoubtedly indigenous.

## QUAINT AND CURIOUS.

Belgian workmen train roosters to crow against each other.

Evidences of sun worship are found in the mythology of every land.

In Damascus, drunken men are called victims of "the English disease."

The first paper ever made in the world was made by wasps. They used it for building nests.

Swords equally as fine as the famous blades of Damascus are manufactured in Bhutan, a State in the Himalayas.

Jonathan Hulls in 1736 made a small steamboat. It failed to work, but had all the germs of Fulton's later invention.

At an auction sale in Chicago a few days ago an inlaid ivory table, which cost \$1,000 in China fifteen years ago, sold for \$17.

Cymbals are believed to be among the earliest musical inventions. They were used in Egypt at least 4,000 years before Christ.

James Watt was an inventor from the moment he was intrusted with the repair of a piece of costly and intricate machinery.

A flag carried in the war of 1812 is a relic prized by Mrs. E. C. Blonnt of Waynesboro, Ga. The flag bears only fifteen stars.

The germ of the guitar is found in the warrior's bow, the string of which gave a sonorous twang as the arrow sped to the mark.

Cocconuts and the nuts of the mahogany trees are often cast ashore on the coast of England, unimpaired by their long journey.

The hand-spinning, with spindle and whorl, is the same the world over and identical with that shown in Egyptian paintings 3,500 years old.

A British clergyman's wife has performed the philological feat of compiling a grammar and a dictionary of the Congo dialect of African speech.

When the masons were laying the wall for J. Harris' house at Byron, N. Y., they found a petrified mud turtle. The head was broken off. The find weighed twelve pounds.

A bear weighing 300 pounds was captured near Mount Pleasant, Mich. It had a trap weighing twenty-five pounds attached to one foot. The trap was very old and very rusty.

The largest oil painting in the world is one by Tintoretto, entitled "Paradise." It is thirty-three and a half feet in height and eighty-four feet in width, and may now be seen in the Doge's Palace, Venice.

#### Did Not Wish to be Emperor.

The Rev. Dr. Bernard Rogge preached the sermon in the Versailles palace, January 18, 1871, when the German empire was proclaimed, and ever since he has been known throughout central Europe as the consecrator of Germany. In a lecture given by him in Vienna early in this month he told of a remarkable interview which he had with the king of Prussia three days before the great ceremony. King William requested him to make the sermon short and exclude from it as far as possible all references to the house of Hohenzollern and his head.

"For I have not done it," said old William. "God in his providence accomplished it. I shall find it difficult to accustom myself to my new title of emperor. My own wish was that at my advanced age I might avoid the honor, although my son might be called to accept it; but matters have turned out in such a way that I can no longer do anything but take it."

When received on the same day by the crown prince, later Emperor Frederick, Rogge got a few more instructions as to the nature of his sermon. The crown prince pointed to the great hall where the ceremony was to be held and remarked:

"When I first saw the palace on the 19th of last September I said to myself: 'There is the place where the founding of the German empire will be proclaimed.'"—*Chicago Times*.

#### Borrowed a House.

A unique case of borrowing is reported from Sherman Mills. A man whose house was destroyed by fire last winter, has borrowed a house from one of his friends, which he will have hauled to his lot and will occupy as a dwelling this summer, returning it in the fall.—[*Kennebec (Me.) Journal*].

#### A Strong Symptom.

"I'm glad Tompkins has struck a streak of luck at last."

Smith—So am I. What is it?

"I don't know just what. I only know that he talked to me for twenty minutes without asking to borrow \$5."—[*Chicago Inter-Ocean*].

## SCIENTIFIC SCEAPS.

Every male elephant is liable to insanity some time or other.

In Finland and East Turkestan thunder storms are wholly unknown.

Brick-dust mortar is said by authorities to be an excellent substitute for hydraulic cement.

Neither chemists nor naturalists have yet been able to solve the question why a lobster turns red when boiled.

Man is composed, according to the scientists, of five bucketfuls of water and forty-five pounds of carbon and nitrogen.

The body of a lizard exudes an acid fluid that serves as a protection to the animal. A dog will not hold a lizard in his mouth more than an instant and can rarely be induced to repeat the experiment.

By exposing the chrysalis *Vanessa atalanta* to a low temperature, it showed great increase in the area of the scarlet bands on the wings, and a great increase in the area of white and bluish markings.

Among the follow-borders of ants and white ant nests in Australia have been found a fly, an undetermined small moth, both from Sydney, and of beetles, two species of *Pselaphidae*, a family often occurring in ant nests, an *Anthrenus*, and another undetermined beetle.

A German electrical paper mentions a patent for an apparatus resembling the Bell radiophone, in which intermittent beam of light focussed on a glass vessel containing lampblack produces audible notes. Mercadier has attempted to use this apparatus for a multiple telegraph system.

There are 43 electric railroads in Europe, employing 538 motor cars and locomotives, and 151 trailers. The systems are divided as follows: Trolley, 31; central rail, 8; under ground conductor, 2; storage battery, 2. There are 24 lines now building, all of which will probably be running before the year is out. A large number of the systems used are American.

#### Both Wept.

When Lawrence Barrett's daughter was married Stuart Robson sent a check for \$5,000 to the bridegroom. Miss Felicia Robson, who attended the wedding, conveyed the gift.

"Felicia," said her father, upon her return, "did you give him the check?"

"Yes, father," answered the dutiful daughter.

"What did he say?" asked Robson.

"He didn't say anything," replied Miss Felicia, "but he shed tears."

"How long did he cry?"

"Why father, I didn't time him; I should say, however, that he wept fully a minute."

"Fully a minute?" roared Robson.

"Why, I cried an hour after I'd signed it!"—*Chicago Record*.

#### Remarkable Leap of a Horse.

One of the most remarkable leaps ever recorded as having been made by a horse, was that by Chandler, an English steeplechaser, while running in the Leamington Cup at Warwick, in 1847. Bell's life of March 28, 1847, records it, as follows: "Chandler was following, there being two other horses and riders leading. At the brook Chandler's rider expected that trouble would come to the leaders. Sure enough, they all piled up together, and with one monstrous leap he cleared the brook and the flounder. After careful measurement it was put on record as being a leap of exactly thirty-nine feet."—*St. Louis Republic*.

#### A Revised Version.

It happened in Sunday-school. The subject under discussion was Solomon and his wisdom. A little girl was asked to tell the story of Solomon and women who disputed possession of a child. She timidly arose up and answered:

"Solomon was a very wise man. One day two women went to him quarrelling about a baby. One woman said: 'This is my child,' and the other woman said, 'No, this is my child.' But Solomon spoke up and said: 'No, no, ladies, do not quarrel. Give me my sword and I will make twins of him, so each of you can have one!'"—*Harper's Magazine*.

#### The World Encircled.

"Have you ever been around the world?"

"No—but my arm has."

"What do you mean?"

"Well, you are all the world to me."—[*Philadelphia Life*].

The Salvation Army in the northwest is negotiating for the purchase of a fast steam launch for the purpose, in the language of the Army, of bombarding all the Canadian Pacific towns.