

# The Democratic Sentinel

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## THE YELLOW METAL.

### FACTS ABOUT BRIGHT AND SHINING GOLD.

Where It Is Found and How It Is Gotten Out of the Ground—Different Methods of Mining Employed—Historic Sutter's Mill, California.

Discovered by Marshall.

The question as to the employment of silver for currency makes interesting some facts in relation to gold, the other metal used for the same purpose. There is an enormous amount of gold produced annually, the output last year being \$138,816,627. Australia furnishes more of this than any country, and we come next with \$33,000,000 worth, which is \$870,800 less than the production of Australasia. The most acceptable theory as to its hiding places is that gold in the days when earth was young existed in certain rocks in a finely divided and powdered condition. The rock covered vast areas. By the slow processes of nature's great laboratory the auriferous atoms concentrated along planes of fracture, the cracks and fissures in the bed rocks mingled with quartz and other minerals.

These are the gold veins and drifts so frequently described in the mining nomenclature of to-day. And it is from this source that the bulk of the world's gold is mined at present. Where these veins have been acted upon by the evading and disintegrating forces of nature the rocky crust has been broken down and the golden atoms again concentrated in beds of clay or gravel. These are what miners term "placers."

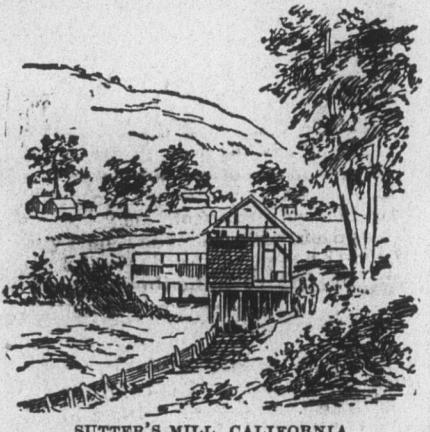
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JAMES W. MARSHALL  
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SUTTER'S MILL, CALIFORNIA.  
Near the present site of Sacramento, where James W. Marshall, of New Jersey, accidentally discovered gold on January 24, 1848, while walking along the tail-race of the mill, thus inaugurating the most dramatic and interesting period of California's history.

for himself. The miner prospected until he found what he thought was pay dirt. Then he staked his claim and set up his "cradle," a rough wooden box into which he shoveled the gold-decked gravel. Upon this he poured water and rocked his cradle until the water had run out at the little sidecaves at the ends, carrying with it the encumbering soil, and leaving the glistening yellow dust and tiny nuggets behind. These were gathered by hand and deposited in the buckskin pouch that formed the sole safe deposit company of the "forty-niner" and his kind. It was a hard life, but full of the fascination of danger and the greater fascination of chance.

The Modern Method.

The days of individual alluvial digging are practically at an end. The miner does not now prospect for himself, but works for a syndicate or a company of capitalists, which carries on business on a gigantic scale. The miners now worked are mostly those in which the gold is held intact in quartz from veins and drifts. The quartz must be broken, crushed and ground fine as powder. This is the work of the stamp mill—huge mortars and pestles operated by machinery. The real difficulty in quartz mining lies rather in separating the gold from the base minerals than in the crushing. The finely powdered mass is carried from



A PRIMITIVE GOLD MINER AND HIS OUTFIT.  
The stamps by running water first over a shallow bath of mercury. Quicksilver is heavy, but gold is heavier, and into the mercury the larger particles of gold sink. Next the water spreads itself over plates of copper, coated with cyanide of potassium. This coating catches still more of the floating particles. The stream pursues its course over a stretch of blankets, the rough and hairy surface of which retains many more of the yellow atoms. Finally the residue falls into a pit, where everything mineral sinks to the bottom, and the water is allowed to run away. To obtain the gold, the mercury bath is emptied, the coating carefully scraped off the copper plates and the sediment at the bottom of the pit washed and saved. The mass

is put into a retort, where the mercury is volatilized and passes off in vapor. The remaining conglomeration of gold, copper, iron, silica and other substances is fused; the gold goes to the bottom and the other ingredients form a crust of slag on top. It isn't as romantic and picturesque as the old placer-mining, but it is a deal surer, and what the miner loses in the feverish excitement of washing gold soil for himself he makes up in a steady job for fair wages. The average cost of producing one ton of ore varies from 50 cents to \$2, and the cost of extracting the gold from the ore runs from \$1 to \$3. This brings the cost of mining to from \$1.50 to \$5 per ton, which experts say is a fair average, though the cost runs higher in some small mines.

Gold in This Country.

California is the great gold field of the continent. Last year there was mined in this State \$12,571,900. An interesting feature of the latter-day mining in California is the extent to which the Chinese are getting into the business. Last year they mined \$1,134,757. This was taken out of placers in sums of from \$10 to \$60,000.

The bulk of the American production outside of California comes from Colorado, Montana, Nevada, and Dakota, Idaho, Arizona, New Mexico, Oregon, Washington, and Alaska following closely in about the order named. Gold is produced, however, in nearly every State and Territory of the Union. The States along the Appalachian range are mining considerable gold. Last year South Carolina produced \$123,364, Georgia \$94,733, North Carolina \$78,560, and Virginia \$5,002. Maryland produced \$1,000, but the year before had \$11,000 set down to her credit.

New and improved methods of mining which have been introduced into these mines within the last year will materially increase their production, as it will make profitable many mines which had been closed, not because they were exhausted, but because it did not pay to work them. Texas, Maine and Michigan all have gold, but not in paying quantities.

A Blight on the Honey moon.

The slush in Fulton street was ankle-deep, but they didn't seem to notice it. It was raining with all the ingenuity of a March storm, but they had no umbrella, and as they stood arm-in-arm at Broadway and Fulton streets, they looked as if they had been married about ten minutes.

He was a thin young man, with a brown derby hat and a slightly troubled look. She was young and pretty, and she wore a pair of white kid shoes, and a big white hat with pink roses all over it and she was happy to think of the weather.

"Oh, Willam," she whispered, as she nestled closer to the thin young man, "isn't it glorious to be alone together, darling, in a great city?"

The thin young man made no reply. The rainwater was dripping from his brown derby-like medicine out of a patent dropper.

"All alone," she continued, gazing blissfully at the tower on the Western Union Building, and, getting a firmer grip on the thin young man's right arm, "home and friends far away, and though the multitude is surging around us, we two are alone together, dearest, and its me and you against the world; isn't it, Willam?"

Willam made no response. He shook some of the rainwater off his brown soggy derby, and then he said: "Let's go back to the hotel, Martha, and set down. If we was led up like chickens to stand around on one leg in the rain, I wouldn't mind. But there's a hole in my left gum apum water like a house afire, and I tell you, Martha, this sort of thing is squeezin' the honey moon."

New York Tribune.

The Story of Brescia.

The little town of Brescia in Italy has furnished the Eastern palaces at Rome ever since the year 1586. How the grant was obtained by Brescia, the brave old sea captain, is a curious story.

Standing with the crowd in the open plaza, before the Cathedral of St. Peter's, he was gazing with breathless interest at the workmen engaged in erecting the Egyptian obelisk. So momentous and difficult a task was this regarded that Pope Sixtus V. forbade any one to utter a loud word during the operation, on pain of death.

All went well until the massive stone column reached a certain angle, when to the horror of the multitude and the despair of the engineer, it ceased to move. Various expedients were resorted to without avail, and all seemed lost, when suddenly a voice broke the silence, crying: "Alga, dai de l'aga a cordel!" ("Water, give water to the ropes!")

This suggestion, which came from the old sailor, was quickly acted upon; the obelisk slowly righted itself and was successfully raised to the position it now occupies.

When the trembling Brescia was brought a prisoner before the Pope for punishment, the latter not only pardoned the offense, but offered to grant him any reasonable request. The unshelish soul of the man showed itself when, instead of petitioning for some personal preferment, he begged that the right of furnishing the palms for Easter should be bestowed upon his family and the villagers of Brescia, his birthplace. The request was granted, and is repeated to this day.

Swearing a Curse for Thanks.

The Bishop was no sailor. He thought the capful was an Atlantic storm, and worried the captain by asking him constantly if there was any danger. The captain led his lordship to the hatch over the fo'c'sle. "You hear the crew blaspheming," he said; "do you think those men would use such oaths if there was any danger of their meeting death?"

The sun set in an angry storm-torn sky, the wind rose higher yet and the good steamer pitched and rolled and groaned and creaked.

It was midnight, and a portly figure crept forward to the fo'c'sle hatch, the dim light glimmered upon a pair of skin-clad calves and an apron.

"Thank heaven!" murmured the bishop, "they are still swearing."

Tea in Thibet.

All of the tea used in Mongolia and

### LATEST THING IN DELSARTE

A Practical System of Physical Training for American Women.

As physical training is engaging the attention and consuming the time of young women everywhere Mrs. Bridget Maguire, Franklin Gretchen Schmidt, Frue Johanna Bjornson, Mrs. Dinah Johnson and others who stand high in the profession which these ladies adorn have organized a school and prepared a course of lectures for the purpose of introducing their system of physical culture. They are also about to publish a book, "The International System of Physical Culture Explained," the advance sheets of which are according to the New York Sun, are already out. Below we give the principal exercises peculiar to this system:

1. Take a scope (the high Latin name for broom) in the hands, which should be held at half reach reversed grasp, allowing the bushy portion of the scope to rest upon the floor and holding firmly to the upper end of the handle. Bend the body slightly forward, give the arms a horizontal movement, lift the scope slightly and move one foot before the other. Repeat these movements until the scope has been brought in contact with every portion of the floor.

2. Holding vertically in the hands a long pole to which a bundle of feathers has been attached, bend the body backward, throw the head well back and elevate the arms until the feathers rest lightly against the ceiling or walls. Move the arms back and forth, carefully holding the pole in position. In a similar exercise, more frequently practiced, a shorter pole is used and the feathers are allowed to pass over the different objects in the room. But this, while excellent for the arms and shoulders, does not call into play the muscles of the spine, neck and chest.

3. Kneeling upon the floor and grasping a wet cloth in the hands, bend the back till the cloth touches the floor. Press the hands down firmly, throw the weight upon the arms, bending them at the elbows as the motion of the hands requires, and pass the cloth briskly over the surface of the floor.

4. Fill a large basin with water and place obliquely in it, so that the lower edge shall rest in the bottom of the basin and the upper one lean against the opposite side, a corru-gated piece of wood covered with zinc. Then take some sort of cloth, sose in the water and rub briskly on the board. A little soap will lessen the friction and render the exercise somewhat more gentle.

5. Take a cloth, treated above, dip into a paste, composed of alymion and aqua pura, that is to say, pure water, and allow it to become almost dry. Spread on a smooth surface and pass quickly over it, a well-heated ferrum planum, or smoothing-iron, bending the back and swaying the body lightly to and fro, in unison with the motion of the implement in the hand.

6. The majority of young women are probably unacquainted with the implements used in these exercises all of the ladies whose names are mentioned above will cheerfully supply all necessary information.

The Oyster Garden of Arcachon.

The great oyster garden at Arcachon, France, is a basin on the Bay of Biscay, connected with the Atlantic only by a very narrow opening, and is sixty-eight miles in circumference and protected from winds by pine-clad heights that surround it.

The waters are salt enough, and yet not too strong, the bottom is of the gravelly sand favorable to oyster breeding, and the rise and fall of the tides are such that the basin is completely covered at high tide and the beds are largely uncovered at low water.

The oyster has always been an inhabitant of this spot, but has been nearly exhausted forty years ago, but has been recruited by individual enterprise under the encouragement of the government. There are now twelve thousand five hundred acres of oyster beds in the basin.

Several thousand men and women are employed to attend them, and the average annual sale of oysters by the principal firm is over two hundred millions.

As the majority of young women are not sold under two years old, and these only for relaying, it is computed that there are usually five hundred million oysters of various ages upon these beds. The beds having been artificially made, the whole process of oyster breeding can be witnessed there. They are laid out in parks, next to the oysters are next ground and the handles filed smooth and burnished with oil and emery, after which the pairs are fitted together and tested as to their easy working. They are not yet finished, however. They have to undergo hardening and tempering, and be again adjusted, after which they are finally put together again and polished for the third time.

In comparing the edges of knives and scissors it will be noticed, of course, that the latter are not in any way so sharply ground as the former, and that, in cutting, scissors crush and bruise more than knives.

How Scissors Are Made.

Though no complexities are involved in the making of scissors, or much skill required, yet the process is very interesting. They are forged from good bar steel heated to redness, each blade being cut off with sufficient metal to form the shank, or that destined to become the cutting part, and bow, or that which later on is fashioned into the holding portion. For the bow a small hole is punched, and that is afterward expanded to the proper size by hammering it on a conical anvil, after which both shank and bow are filed into a more perfect shape and the hole bored in the middle for the rivet. The blades are next ground and the handles filed smooth and burnished with oil and emery, after which the pairs are fitted together and tested as to their easy working. They are not yet finished, however. They have to undergo hardening and tempering, and be again adjusted, after which they are finally put together again and polished for the third time.

One of the sublimest effects in nature is occasionally seen by those who climb the tall and isolated peaks of the Rocky Mountains in Colorado. The dryness of the air and the strong heat of the afternoon sun cause a rapid evaporation from the brooks, springs and snowbanks on the mountain sides, and this moisture, rising on the warmer air, condenses as it reaches the cooler, thinner atmosphere about the mountain top. The traveler, says the New York Sun, looking down, sees clouds literally covering the peaks of the mountains.

For the reception of the young oysters or "spat," coated with mortar, so that anything fixing itself to them may be scraped off easily. Sometimes each of these tiles will be covered by five or six hundred young oysters.

They develop rapidly, and in about a month take the form of real minnows.

They then need more room, and are thinned by scraping, to be placed wider apart on other tiles, or to be transferred to their final beds, or to wire-bottomed trays.

Tea in Thibet.

All of the tea used in Mongolia and

the stamps by running water first over a shallow bath of mercury. Quicksilver is heavy, but gold is heavier, and into the mercury the larger particles of gold sink. Next the water spreads itself over plates of copper, coated with cyanide of potassium. This coating catches still more of the floating particles. The stream pursues its course over a stretch of blankets, the rough and hairy surface of which retains many more of the yellow atoms. Finally the residue falls into a pit, where everything mineral sinks to the bottom, and the water is allowed to run away. To obtain the gold, the mercury bath is emptied, the coating carefully scraped off the copper plates and the sediment at the bottom of the pit washed and saved. The mass

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