

California.—Her Works and Ways.

WONDERS OF TABLE MOUNTAIN.—The Union Democrat (Sonora) continues its glowing descriptions of the riches of Table Mountain. It states that it is the richest gold region in the world. It says:—

"In addition to the enterprise of the citizens of Sonora, hundreds of persons from a distance have invested largely in money and labor, both in tunneling and sinking shafts at various points about the mountain. Last Thursday, during a trip down within a few miles of the Stanislaus river there were counted thirty-seven new shafts, and six new tunnels that had been commenced since the 15th inst. In Turner's Flat, a few miles below Jamestown, several shaft companies have struck rich leads of gold during the past week. The Boston Tunnel Company, last week, struck as rich dirt as any yet taken out. In the Mountain Pass three new tunnels have been commenced, with flattering prospects. Parcels of the gold washed at these diggings have lately been taken to the Mint at San Francisco, where it is found to be worth nineteen dollars and five cents to the ounce.

Among other new discoveries that have been made in the mountain we may mention that bushels of oyster shells, in a partially decomposed state, have been taken at the depth of one hundred and fifty-nine feet, some retaining the rough appearance of oysters just lifted from the bed of a bay. The mixed deposit of sediment and quartz pebbles in which these shells are found abounds in gold. Pure lime, equal in appearance and value to the manufactured article, has also been found in great quantities in tunneling the mountain a few miles below the Pass."

THE CALAVERAS SOAP MINE.—Sonora papers mention the soap mine discovered in Table Mountain. The Union Democrat remarks:

"Mr. Dinsmore, of the Kennebec Mining Company, near Vallecita, has furnished us with several curious specimens of a deposit taken out of his shaft, so nearly resembling soap that it is difficult to distinguish it from the genuine manufactured article. The cakes are of a brownish hue, and, from practical test, we find they answer all the purposes of bodily ablution quite as well as any soap. The vein is about six inches in thickness, and forms a distinct stratum between what is called the pipe clay, some fifteen feet from the surface. The article is destitute of both taste and smell."

[This, no doubt, is a stratum of "Fuller's earth," a substance which produces some results similar to those obtained by the use of real soap. Fuller's earth may be successfully used in washing; it abstracts the greasy matters from the skin or cloth by absorption, and thus renders removal by scrubbing more easy. Soap, however, has a chemical effect, and the principles of its operation are wholly different. It contains a slight excess of alkali, which unites chemically with the grease, and renders it soluble in water; the particles of dirt that adhered to the skin or cloth by reason of the grease, become liberated, and are held in suspension by the water.

RESOURCES OF CALIFORNIA.—The Empire County Argus calls attention to some of the magnificent resources of California. Look at them! Two medicinal springs in El Dorado, one of ipecac, another arsenical, and a lode of blue mass. In Nevada a soap mine, in Calaveras a chalk mine and a mine of plumbago, (also a soap mine.) Near Sonora there is a mountain of gold, with a company now engaged in cutting out a chunk of nearly thirteen tons in weight, to be forwarded to Washington. At the same place is a diamond mine of vast extent, the earth above the bed rock on an average eighty feet deep. Two-thirds of this earth is composed of diamonds varying in size, the largest the size of a pea, the smallest the size of nothing whittled to a point."

This is, no doubt, rather extravagant language, still California is a great country.

ARTESIAN WELL ENTERPRISE.—From the California Farmer we learn that the Artesian Well borer of Meyers & Co. is at work at Mare Island, San Francisco. It has reached the depth of 137 feet. It struck blue clay at 117 feet, then a small strata of rock, next soft strata, then sandstone, and at present the laborers were working at 137 feet depth upon slate rock, and had 115 feet water. They have

sanguine expectations of finding an abundance of pure water, but by the course of the rocks observed thus far, it will require boring to the depth of about 500 feet.

A SUBTERRANEAN STREAM BROKEN OUT.—The Grass Valley Telegraph states that while a party of miners were engaged in driving a tunnel into a hill at the Buena Vista diggings, the workmen came unexpectedly upon a stream of water, which rushed upon them with such force and in such quantity that they were barely able to escape with their lives. The water increased gradually from a small stream, let into the tunnel by a single blow of a pick, the point of which was driven through into the subterranean current, until it filled with its volume the entire capacity of the tunnel, forcing before it, in its headlong course, huge rocks and logs, and whatever else came in its way. Its violence—produced, no doubt, by a high

head pent up within the cavernous recesses of the mountain—soon began to subside, and in about three or four hours the stream had dwindled down to a little rivulet of some 25 or 30 inches of running water, which quantity it now, after a lapse of several days, steadily discharges.

A factory for making segars from native tobacco has been established in San Francisco. The tobacco is said to be excellent. Stephen Crawley, an old submarine diver, was recently suffocated in a diving bell at the depth of 24 below the surface, in San Francisco harbor.

The Gold Produce of Australia.

Part of 1851 and 1852, value in round numbers, £14,000,000; 1853, £11,500,000; 1854, £8,300,000; 1855, estimated (on nine months' produce,) £8,000,000.

Patents Issued in 1854.

Table with columns for patent classes (I. Agricultural Implements and Operations, II. Metallurgy and Manufacture of Metals, etc.) and rows for various states (Me., N.H., Vt., Mass., R.I., Conn., N.Y., N.J., Penn., Del., Md., Va., N.C., S.C., Ga., Ala., Miss., La., Tenn., Ken., Ark., Me., Ohio, Ind., Mich., Ill., Wis., Iowa, Fla., Texas, D.C., Cal., Foreign) and a Grand Total row. The table shows the number of patents issued in each class and state.

REMARKS.—New York has the greatest number of patents. Massachusetts, Connecticut, and New York, are the only States which have patents in every class. Massachusetts has the greatest number of patents in one class, 63. New York takes the lead in Metallurgy, 58. Massachusetts in Textile Fabrics, 63. Pennsylvania in Steam and Gas Engines, 18, but one, however, ahead of New York (17), that one may be the gas engine from Philadelphia. New York takes lead in classes 1, 2, 4, 5, 7, 9, 10, 11, 12, 15, 18, 19, 20, 21, 22. Massachusetts takes lead in classes 3, 8, 14, 16, 17. Pennsylvania takes lead in classes 6, 13. Arkansas and Florida have each only one patent. New York, Connecticut, and Massachusetts, have more than one half the whole number of patents, excluding extensions, &c. Massachusetts has one patent to 3050.9 of population. Connecticut has one patent to 3298 of population. New York has one patent to 6541.1 of population.

Pennsylvania has one patent to 9565.2 of population. This statement shows Massachusetts and Connecticut to be really nearly equal in inventive genius, while it reduces New York one-half, thus giving the two former States the lead.

The most numerous patents were for sewing machines, being 34. The next, Planters, 32. The next, Fire Arms, 30.

There were designs for stoves, 42. The most novel were a hen's nest, a tape worm trap, shirt collars, and coffins, for which last there were three. T. G. S.

[The above table is similar to that prepared by our correspondent last year, but valuable and use ful as that one has proved to be, this one is more valuable still, because it is divided into more classes. It has cost him much labor and patience, and he has executed his work with great care. We take upon ourselves to present him the thanks of all our readers for this labor of love in the cause of invention.

The Southern Minnesota Herald says that Mr. Looney, of Root river, gathered this year 4,000 bushels of corn off 70 acres, more than half of which had not been touched from the time it was planted.

A New Theory of Light and Heat.

1st. Heat nowhere exists by itself, but must be connected with matter, and has no power of transmission except through matter. 2nd. Latent heat exists in all matter, but solid matter contains less than fluid, and fluid than vapor. 3rd. Heat also exists in a sensible and free state, that is, capable of being given out from or absorbed by matter. 4th. Heat in connection with matter exists in a luminous state. The sensible temperature of the earth is raised by reducing gases and aqueous vapor to water, and water to ice; for the latent heat is then set free; hence the atmosphere, being the receptacle of this heat, is capable of supporting combustion and other chemical changes. All light is the result of combustion, and is as much flame as the source from which it emanated; for it can be condensed by refraction through a lens and rendered more powerful than flame produced by artificial means. Hydrogen gas is given off from the earth's surface, and, coming in contact with oxygen, the result is combustion, which forms the "beautiful flame called the blue sky," and is the source of all the light the earth receives. To supply the necessary ingredient all the fluid and solid matter on the surface contribute their share. Now, gases differ from aqueous vapor and effluvia, for these can be reduced by extracting their sensible heat; but neither water nor steam can be decomposed into oxygen and hydrogen by sensible heat only; another chemical process is necessary, which the author calls digestion, by which the atmosphere is replenished with the necessary means of combustion. There are two actions in nature, mechanical and chemical, to which the author adds a third "ignipotent"—which is again subdivided into "local action," that is, confined to the earth's surface; and "general action," existing throughout creation. The combination of the two actions in the atmosphere produces from the ignipotent influence of the sun all that ocean of flame which is called sunshine or daylight; while the ignipotent influence of the moon acts with a greater degree of intensity. The sun's influence upon the atmosphere is the same as the moon's upon water."

[The above is a summary of the views respecting light and heat, by G. F. Harrington, England, who has recently published a paper on the subject, that has caused considerable discussion among English savans. It is an effort to supersede the theories of Descartes, Newton, and Herschel, respecting light and heat, and the office of the sun; some of the views are different from any heretofore presented through our columns on these questions.

Keep the Mouth Shut During Cold Weather.

In the Journal of Health, Dr. Hall advises every person who goes out into the open air from a warm apartment to keep the mouth shut while walking or riding. He says:

"Before you leave the room bundle up well—gloves, cloak, comforter—shut your mouth before you open the street door, and keep it resolutely closed until you have walked briskly for some ten minutes; then, if you keep on walking, or have reached your home, you may talk as much as you please. Not so doing, many a heart once happy and young now lies in the church-yard, that might have been young and happy still. But how? If you keep your mouth closed and walk rapidly, the air can only reach the lungs by a circuit of the nose and head, and becomes warmed before reaching the lungs, thus causing no derangement; but if you converse, large drafts of cold air dash directly in upon the lungs, chilling the whole frame almost instantly. The brisk walking throws the blood to the surface of the body, thus keeping up a vigorous circulation, making a cold impossible if you don't get into a cold bed too quick after you get home. Neglect of these bring sickness and premature death to multitudes every year."

To Prevent Horses Falling.

One of the omnibus lines in this city has applied a safety cradle to their stages, to prevent the horses falling on the Russ pavement. It consists of straps connected with the front part of the stage, stretching forward and slung under the body of the horses, so as to hold them up when they slip on the pavement. The object of the invention is good, and very necessary.