

COAL.

The coal heretofore found within the limits of the State, is of the variety known to geologists under the name of Lignite, or recent coal, as distinguished from the more compact masses of carbon found in the formations called carboniferous par excellence. Whether or no the harder varieties of coal will yet be found, remains to be elucidated. The opinion of certain geologists, however, seems to be meeting with favor, that coals approaching more or less nearly the characteristics of those of the true carboniferous era, may and have been found, at great depths, at those points where the coal measures have been tilted up at a high angle, and where the lower portions of the beds have been exposed to the greater pressure.

That the formation of the coals is due to the aggregation of woody fibers in the deltas of former rivers, and in the basins of former lakes, does not admit of any doubt; and that new coal beds are now forming in various parts of the world, is equally true.

Subsequent to this deposition, and as a consequence of the changes in the superficial configuration of the earth, great masses of sandstone, earth, etc., have been superimposed, and, from pressure and time, a thorough carbonization of the woody fiber has taken place. Accepting this theory of formation as true, it is preferable to use the term bed instead of vein; without reference to the fact that the coal measures are found tilted up at all possible angles.

The coal beds of California are confined chiefly to the cretaceous formations of the Coast Ranges, and find their best exemplification on Monte Diablo, in Contra Costa. Traces of coal are reported at various points near the coast, from Del Norte to Los Angeles; in Humboldt, within three miles of the town of Arcata; in Colusa, Monterey, etc. Lately, while excavating to lay the foundations of some buildings on Mare Island, a few very thin seams of coal were discovered. In the hydraulic diggings of the foot-hills of the Sierras, in Shasta, Nevada, and Amador counties, we find small bodies of Lignite and pieces of silicified wood.

On Dry Creek also, seven miles from Folsom, there is reported a small deposit of coal. The past conformation of certain portions of the county of Contra Costa offered the conditions most favorable to the deposition of large and workable beds of coal. We find traces of this basin extending southeastwardly as far as Corral Hollow, in San Joaquin County, and perhaps the few seams of coal southwest of Manly's Ferry may mark its continuance into the foot-hills in that direction. No commercial importance, as yet, attaches to any of the beds outside the Mount Diablo region. The mines at this point, the most important of which are the Black Diamond, Union, Eureka, Pittsburg, and Manhattan, were discovered on the 19th of December, 1859, by a Mr. Frank Somers. The beds have an average thickness of about three and one-half feet. The mines are distant from the point of shipment, on the San Joaquin River, about five miles; they give employment, directly and indirectly, to over seven hundred operatives. The first attempts at burning the coal from Mount Diablo were unsuccessful, but an alteration in the construction of the furnaces demonstrated its usefulness for raising steam, until, at the present time, it is used for hundreds of stationary engines, and for the furnaces of the steamers which navigate the inland waters of the State.

Four years after the discovery by Somers the coal product of Mount Diablo had reached, for the year 1863, a total of 37,453 tons; the amount raised has gone on steadily increasing until we have for the present year a product of 80,000 tons. With the increase in manufacturing, and greater extension of the means of easy transportation, the yield of the Mount Diablo mines will, doubtless, be much enlarged—since the present rate of production by no means greatly taxes their producing capacity.

ASPHALTUM.*

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* Facts from Don Alfredo Robinson.

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