
[Reported Officiolly for the Scientific American.] LISTOFP\&TENTCLAIMS tssued from the United States Patent Office for the week ending september 9, 1856



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CARrRiDars-Julius Riedel, of Pleasant Hill, Ky : I I
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WIxDmiLLL-Ephraim Whitman, of Abington, Mass.:













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Virginia Gold Mines.
The New York Tribune of the 19th inst contains a letter from J. Winchester on the mining capabilities of Virginia. The follow ing are a few extracts from it :-
"There are mines on which $\$ 100,000$ and $\$ 300,000$ have been expended, and it would puzzle any person to tell what had been done with the money to any better purpose tban throwing it into the sea

California is scarcely a more inviting field for tbe miner than this very State, not a day's journey from the commercial capitol of the Union. Facts in proof are not wanting.
I am well satisfied that, considering the recent improvements in metallurgical science, especially in the treatment of pyritiferous ores, which form so large a portion of the gold and copper lodes of the Southern States, a new era is about to be opened, in which capital will find the reward hitherto not realized.

The mine at which I am stopping-the Woodville-after years of perseverance under the direction of Dr. S. F. Ambler, has become a success. Dr. Ambler has recently invented and erected a new and admirable contrivance for working sulphurets. I have seen its operation, and have no doubt whatever that he has hit upon a desidesideratum in the reduction of sulphur ores, and the release of the gold It needed but such a discovery to render all the auriferous sulphurets profitable which have ever before stubbornly refused to yield up their

The whole letter leaves an impression on the mind that gold itself exists in the state of an ore-as sulphurets and pyrites-whereas gold is only associated with the pyrites of copper and iron in some Virginian mines, and is never found as an ore, strictly speaking, but commonly as an alloy, with metallic silver copper, and some other metals. It is plainly stated that the working of auriferous pyrites -gold associated with iron and copper pyrites -in Virginia has hitherto been unprofitable but by a new invention of Dr. Ambler the gold can be released profitably, and "a new era is about to be opened, in which capital will find a reward not hitherto realized."
Virginia is rich in gold quartz, but her auriferous sulphurets have always been considered poor ores, because they require smelting, which is a far more expensive process than that of amalgamation by mercury, where the gold is found unassociated with the sulphurets of other metals. The statement that aurifer ous sulphurets have ever before stubbornly refused to yield their treasures, is not correct Dana, our greatest mineralogist, states that it has been found profitable where metallic sul phurets and other ores are abundant in gold rocks, to work them by smelting, and he de scribes the profits obtained by smelting such ores in Russia, in comparison with the simple treatment of them by amalgamation. If, by the process of smelting, the gold can be pro fitably reduced from the auriferous pyrites, this can be easily demonstrated without ver expensive apparatus in any of the Virginia mines. The ores of each mine should be fair ly tested before expensive reducing apparatu is fitted up, because their character and qual ity-even when separated but a short distance -differ so much from one another. It would be hazardous, in our opinion, to invest capita argely in any mine for the reduction of gol from auriferous pyrites, until it was fairly de-
monstrated that such investment was beyond a doubt, safe and profitable.

