

**VALUE OF ALFALFA.**  
The growth and cultivation of alfalfa as a never-failing source of feed adapted to dry climates and arid soils is unquestioned. Its power to obtain a footing in the soil and to retain moisture sufficient to perpetuate its growth are incalculable. Hence its cultivation should be more generally resorted to where other vegetation refuses to grow for lack of moisture. It is an effective agency in the reclamation of sterile lands.

The Denver Field and Farm, which ought to be good authority, in answering the question, "How long will Alfalfa live and produce without being re-seeded," says:

"We conclude that there is no one living who could answer the question with intelligence. It has lived on in the country from which we have obtained it though many generations of men, and nowhere in history can we find it has ever died out. We read that three hundred years ago the Jesuits from Spain sailed the South seas, and as a precaution against the starvation of shipwrecked mariners, planted alfalfa on the little islands of the ocean, and left a few pair of goats—male and female—that they might eat this everlasting plant and produce their kind, and possibly be the means of saving human life. We have knowledge of fields of this plant still flourishing near the ancient city of Pueblo, that were planted in the days of Cortez, the invader. In speaking of this subject with Colonel Ed M. Wood of this city, he who traveled Old Mexico long before the reign of Santa Ana, we learned some interesting facts about the plant, and from one who has observed it growing for over a half a century. 'I was in Chihuahua as early as 1844, and to feed my mules, purchased some alfalfa cropped from a field near the city. Forty years later, 1884, I again returned to the country, and on seeing the same field fresh with that beautiful grass plant, I enquired of the proprietor—who was the same Castilian I had purchased the hay of in the olden time—if this had ever been replanted, or the land fertilized, and was told that it had not. He informed me that from his best information the field had been planted by his ancestors, 100 years prior to 1844.' In the grand valley of Taos, near the village of that name, is a small field of this plant growing that has yielded three crops per year for more than one hundred years. We were informed by the proprietor of this meadow, a few days since, that he had cut the grass from this field for sixty years, and he believed that the crop of the present year was stouter than it has ever been before. Now from all these evidences, we conclude that alfalfa is a never-fading plant."—San Diego Union.

**AN UNCOMMON FISSURE VEIN.**  
In the whole history of mining it is difficult to find any account of a fissure which equals that is commonly known as the Smuggler vein, in Marshall Basin, San Miguel county. The properties located on the vein and worked at a profit are the Union, Smuggler, Sheridan and Mendota, and through these claims there is one continuous chute of pay ore, which is three thousand five hundred feet long. The ore in this chimney does not occur in pockets or bunches, giving spots only which will pay for stopping, but the entire vein is stopped out, no portion of it being too poor to yield pay ore. There are several peculiar features about the vein, making it one of the most interesting studies for the mining geologist. One is the occasional occurrence of free gold ore next to one wall, while next to the other the ore will be a rich silver ore, the silver occurring in the form of a sulphide. Proustite or ruby silver, stephanite, grey copper, galena, chalcocopyrite and native silver and gold are all found in the vein.—Denver Republican.

**ROOFING MATERIAL.**  
(From the Enterprise.)  
In a country like Southern Arizona, where habitations are required to be impervious to heat and cold as well as water, the question of material for roofing is as serious and important one. Shingles are liable to warp and crack under the heat of the summer's sun, and iron absorbs an undesirable quantity of heat. The old mud roof comes nearer to filling all requisites with the one serious fault that it may take a sudden notion during a rain-storm to dump the water into the house instead of carrying it off.

Mr. C. D. Henry, of this place, during his sojourn in Sinaloa, Mexico, some years ago, saw old reservoirs that withstood the effects of time for centuries and were still apparently in good condition. He learned that the peculiar cement with which they were lined was a simple compound and quite inexpensive. It consisted of no less than common lime mortar into which a quantity of prickly pear juice has been incorporated. The prickly pear was placed in a barrel or tank after being cut up in pieces a few inches square, and then covered with water. In several days a fermentation commenced, when the slimy substance was poured off and was ready to mix with the mortar. The philosophy of the virtues of the mixture were not explained and the Mexicans were content

with knowing that it made an enduring cement absolutely impervious to water. In building his residence in Florence, Mr. Henry availed himself of the knowledge obtained in Sinaloa, after having made a failure of a cement roof. He followed the formula above given, and although a heavy rain fell the day following its application, not a drop of water found its way through the roof, and it has as successfully withstood all the subsequent storms.

If the experience of others corroborates that of Mr. Henry, one of the most difficult problems to builders in warm countries will be solved, for the material can be easily applied to any style or angle of roof and a couple of coats of paint will give it any desired shade and probably add to its durability.

**AMERICA'S HIGHEST MOUNTAIN.**  
The highest mountain in America must now be changed from Mount St. Elias to Mount Wrangel, a little to the north. Several of these mountains have been newly measured. Mount Hood once "roughly" estimated at 17,000 feet, then closely at 16,000, was brought down by triangulation to 15,000; an aneroid barometer made it 12,000 and a mercurial barometer 11,255. Mount St. Elias, estimated by D'Aleget to be 12,672 feet, is triangulated by Mr. Baker to 19,500. It now appears that Mount Wrangel, lying to the north, rises 18,400 feet above Copper river, which is turn 2,000 feet above the sea at that point. If this holds true Mount Wrangel is at least 1,000 feet higher than any other peak in North America. It lies within the United States boundary.—Nature.

In November, 1884, without any provocation or suspicion, but purely from malicious motives, an agent of the Atlantic and Pacific railroad company caused the arrest of Art McDonald, the Under Sheriff of Apache county, charging him with stealing coal from their cars at Holbrook. McDonald in vain sought an apology from the Superintendent and solicitor of the road, after he had been honorably discharged by the Justice of the Peace. The attorney would say nothing; the manager E. W. Smith, instead of sending him a line which he could show to his neighbors and friends in his vindication, added insult to injury by telling him that the coal found upon his lot made his case look ugly. In December, 1884, McDonald having no other recourse, sued the company for malicious prosecution. Owing to the rulings of the Judge, for four terms of the court no service of a summons could be had upon the road. At the last term of our court, under our new code and the rulings of Judge Wright, McDonald succeeded in getting the railroad into court.

Judge Hazeldine then moved the case to the Federal Court at Prescott. The trial took place on the ninth instant, and was a triumphant and complete vindication of McDonald, and a verdict against the Railroad company for \$2,300 damages.—St. Johns Herald.

**THE IMPENDING CASH IN SOUTHERN CALIFORNIA.**

Charles Naudhoff, a special correspondent of the New York Herald, in a letter to that paper, from which we quote says, in reference to the California boom:

"The state of the case is deplorable, and the reaction and failure destined soon to succeed to this senseless craze will bring on one of the most wide-reaching crises ever known in the United States."

He fortifies his opinion by a quotation from the Sacramento Record-Union, which particularly refers to Los Angeles as an illustration of the craze. It says:

"We do not believe that the 60,000 acres immediately adjoining Los Angeles, which have been divided into town lots, can maintain town site values with less than 2,000,000 of population. The city of San Diego embraces nearly 90,000 acres. Applying the computation of twenty persons to the acre, 1,800,000 will be required to maintain townsite property values over this vast extent of land. Every earnest, sober and patriotic consideration urges a protest against this condition. It cannot result otherwise than disastrously to the best and truest interests of the people of the State. It is being promoted unquestionably by real estate boomers, brokers and agents, who have personal, pecuniary motives in view."

Land prospectors in from Colfax county, N. M., state that the Rock Island Railroad company have two thousand teams and a large number of men at work on its grades in Northwestern New Mexico. From Seward, Kansas, across No Man's Land and west to a point sixty miles east of Ocate on the A. T. & S. F., the work of grading is in progress. Grade stakes have been put down to Ocate and Dorsey station, at one of which points the Rock Island is to cross the A. T. & S. F., reaching the Rio Grande valley, via Cimarron Pass, Juan Vigil canyon in Taos valley, sixty miles north of Santa Fe. This is the Pacific coast line of the Rock Island.

**LOW GRADE GOLD ORE.**

[From the Mining and Scientific Press.]  
In a recent number of the Mining and Scientific Press (Oct. 22d), we gave the record of the Spanish mine, Washington township, Nevada county, in this State, for the month of September, which showed some remarkably cheap mining and milling, the work being done on a large scale. The mine is under lease to F. W. Bradley, and a sworn statement is made each month of the yield and cost. The record for October is even more surprising than that of September, recently quoted, for several hundred tons more rock were mined and milled, and a profit was made on rock worth less than a dollar a ton. According to the terms of the lease, all proceeds must be applied to the payment pro rata of the preferred claims against the mine, so that the statement may be relied on as accurate. The record for the last month is as follows:

MINE.			
Run: 28 days' work produced 3443 tons of ore.			
Cost of Production:	Labor.	Supplies.	Total.
Delivering ore to mill	\$713.50	\$113.40	\$826.90
Drift work	102.20	10.83	113.03
General expenses	76.35	1.95	78.30
Totals	\$892.05	\$126.18	\$1018.23
Cost per ton	30.100	4.200	34.300

MILL.			
Run: 24 1/2 days' reduced 3440 tons of ore.			
Cost of Reduction:	Labor.	Supplies.	Total.
Mill expenses	\$27.32	\$194.33	\$221.65
Water for power	161.70	161.70	323.40
Hauling ore	154.50	5.35	159.85
General expenses	78.40	1.95	80.35
Totals	\$656.22	\$357.33	\$1013.55
Cost per ton	19.300	10.600	29.900
Ballon produced			\$318.55
Total expenses			2015.04
Profit			\$1123.57

It will be seen from this that the ore only yielded a trifle over 91 cents per ton, yet a profit of 32 6-10 cents per ton resulted. The percentage of profit was 35 8-10 of the total. This is the very lowest record of quartz working yet. The fact that any profit at all can be made on such low grade ore is remarkable. In September 2796 tons of ore were worked which yielded \$1.16 per ton. The profit was 56 cents per ton, or about 48 per cent of the total. The profit that month on a yield of \$3268.49 was \$1572.91. The cost of mining was 37 1/2 cents, and of milling 23 cents per ton.

Huntington mills are used, there being one 4-foot and 5-foot mills. These combined mills in working the 3443 tons of ore last month crushed 140 1/4 tons per day, at a cost of 23 9-10 cents per ton. This is a record of quartz crushing which is hard to beat.

**THE CURSE OF THE COUNTRY.**

It is safe to say that during the past few weeks there has been more systematic blackmailing done in this city than in any other town or camp in the west. We are personally cognizant of several important deals—the consummation of which would have been of great advantage to the country—which have failed through the blackmailing of persons residing in this city. When a sale is broken in this manner, it is not one time in a thousand that the parties ever do invest a cent in the country, whereas if they were left alone thousands of dollars would be turned loose. Blackmailing is a despicable sort of business at best, but when it is indulged in by men who are interested in the country, it is simply unpardonable.—Silver City Enterprise.

We have just learned, with infinite satisfaction, that what are known as the tax cases against the Atlantic and Pacific Railroad Company, were decided by Judge Wright on last Thursday, favorably to the country. The court held in the Baca case, that the railroad and county, in good faith entered into contract as to the basis of taxation of the road. That the county had kept its faith in the matter and had done no wrong. The railroad, though it had conducted all of the negotiations through its solicitor, Judge Hazeldine, and paid taxes two years under the agreement made by him for it, could not, when it suited its interest or caprice, repudiate his conduct—would not be permitted, to use the language of the court to "blow hot and cold" as suited its convenience, but must pay up.

In the Lesueur case, the court decided that while the road's right of way was, in express terms, exempt from taxation, yet the act of Congress being silent on the subject, the improvements placed on the right of way and a certain proportion of the rolling stock, telegraph line, etc., were properly assessed and should pay taxes. Otherwise, said the court, all of the rolling stock of the numerous railroads concentrated at Kansas City and Chicago would only be taxable in those two cities, notwithstanding the fact that nine-tenths of it, most of the time, was elsewhere, receiving the benefits and protection of the local laws and the police force.

The opinions in both cases are exhaustive and elaborate, covering the whole ground fully and fairly, and are spoken of by the attorneys who heard them in terms of the highest commendation. They are said to reflect great credit upon the astuteness and ability of Judge

Wright as a learned lawyer—they certainly are the highest possible tributes to the manliness and fearless integrity personally of our distinguished Chief Justice. The amount involved was about \$35,000.—St. John's Herald.

On Tuesday the men employed by the Southern Pacific Company, three miles east of Indio, struck a steady flow of pure water at 540 feet in depth. The present flow is about 10,000 gallons per hour, but the engineer in charge expects to obtain a flow of at least 24,000 gallons when the pipe is cleared of clay and gravel. Work has been going on for the past six weeks on this well, the success of which will undoubtedly result in many more being bored.—Yuma Sentinel.

A jury in Tombstone has acquitted a murderer whose crime was probably as cold blooded as any that has stained the criminal records of the Territory for years. A few examples of a stern application of justice are necessary to remove the horrible suspicion that the blind goddess is accumulating a bank account.—Florence Enterprise.

The richest gold mine in the world has been found on the Hassayampa River in Arizona. This historic stream was named by an early Spanish settler after a jeu d'esprit of his little son, who, on being told to give his brother a cold potato, replied, "he has a yam pa."—N. Y. Graphic.

Governor Zulick has recalled his proclamation in reference to the quarantining of cattle from Mexico. He issued it in compliance with the law, the sanitary commission demanding it, and now he lifts the quarantine in justice to the cattle men of the Southern portion of Arizona.

An eastern paper says that a cup of hot milk, into which a spoonful of ground ginger has been stirred, will effectively break up the chills if taken just as one is coming on. It is a simple remedy and is worth trying.



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