

The Emma Mine Again.

We have received from London a copy of the directors' report on the famous Emma mine, in Utah, which presents a very gloomy prospect for the shareholders ever getting their money back, although suit has been commenced against the vendors.

"Shareholders are aware that the mine was seized under attachment by Park at the time the action against him and others was taken, and that it has ever since remained vested in the United States marshal (sheriff); consequently the directors are unable to report as to any explorations, and have no reason to suppose that any discovery of ore would have been made had such explorations been undertaken; on the contrary, very voluminous reports from independent sources induce them to believe that the mine itself is, and has long been, utterly exhausted. The only available source of income that could have accrued to the company, and that only to a very limited extent, would have arisen from the concentration of the 'fillings' or low grade ore left from former workings."

Advice recently to hand states that Mr. Park under his attachment had sold the personal property of the company—i. e., the whole of the machinery, plant, timber on surface, the ore sacks, office furniture, etc. We have sent out instructions to pay off the Salt Lake establishment, and measures are in progress for a further reduction of expenses at the London office by the retirement of the secretary, etc. Mr. Atwood, the general manager, has returned from America; he will be present at the meeting; his report accompanies this. The case against the vendors is being vigorously proceeded with, and evidence has been collected in this country from the officers of the company, the promoters, solicitors, trustees, stock brokers, ore brokers, accountants, bankers, all the English original directors, and the American ambassador; testimony has also been taken at Salt Lake City by commission. The result of the evidence has, in the opinion of the company's legal advisers, tended to strengthen the claim of the company against the vendors, and the causes are already set down for trial in the United States circuit court. Facts have also come through the late commission in England to the knowledge of the board which have induced us, under the advice of our solicitor, to apply for the restitution of moneys received by certain of the original directors. The solicitor has prepared a report upon the commission, which report, and the opinion of counsel thereon, will be in our hands to be dealt with at the forthcoming meeting which may determine. The directors have no desire to remain in office, and will resign their seats at the meeting on November 10th."

The report of the manager, Mr. George Atwood, is also discouraging, as were his previous reports. He tells in detail how he extended his drifts, etc., without finding any ore. He says: "The fillings and scrapings still remaining in the mine are not yet all worked out, but it is almost impossible to form an accurate opinion upon either the quantity or quality of the same. Taking a rough estimate, I should think you have about 4,000 tons in the mine of poor waste, etc., that should yield by concentration 350 tons of ore, assaying thirty-five per cent lead, and seventeen ounces of silver to the ton of 2,000 pounds. Estimated gross value, \$30,000. Second class dump: There is still remaining on the 'dump' about 100 tons of the 'original dump,' and about 150 tons that has been mined under my management. Estimated gross value, \$3,200. Condition of mine: The present condition of the mine is a most deplorable one. The water having risen within fifty feet of level No. 1, and remaining there a greater part of the summer, it has now receded to about twenty feet above level No. 4. The result is that the timbers have given way in all directions, and even the engine shaft cannot be considered safe to work in. It will now be a most difficult as well as a dangerous and expensive piece of work to mine what fillings, waste and scrapings still remain. The greater portion of the old workings above level No. 1 has 'caved in,' and made an immense hole on the surface, extending for 300 feet in length, some thirty feet in width and forty feet in depth, exposing the 'slide' shown in the 'geological diagram' which accompanied my last report, in a most remarkable manner; as the slide comes up within a foot of the surface the whole distance of 3,000 feet, and stands perfectly solid, and all the ground on the lower or southwest side has fallen away from it, and is rapidly filling up the old workings above level No. 1. The Salt Lake office has been abolished, and the services of all the employees connected with the same have been dispensed with. I have now only two men employed at the mine to watch over your interests there."

In conclusion, Mr. Atwood says: "I may say in conclusion that my first report on our mine was made in March, 1873, and was an unfavorable one, that my second report was made in May, 1873, and was even more so, and that my third report, made in April, 1874, was equally unfavorable. Since the last was written, I have had sixteen months' further time to examine into the geology and stratigraphical features of Emma hill, in regard to the future prospects of your mine, and from my numerous careful observations on the subject, I can only reiterate what I have stated in my previous reports, that is, that your mine is virtually exhausted, and that your only hope for the future rests entirely on solving a geological problem, which problem will take time, a large sum of money and skillful engineering to solve."

NEW USE FOR SAWDUST.—Sawdust can be converted into a liquid wood, and afterwards into a solid, flexible and almost indestructible mass, which, when incorporated with animal matter, rolled and dried, can be used for the formation of solid and durable articles, in the following manner: Immerse the dust of any kind of wood in diluted sulphuric acid, sufficiently strong to affect the fibers, for some days; the finer parts are then passed through a sieve, well stirred and allowed to settle. Drain the liquid from the sediment, and mix the latter with a proportionate quantity of animal oil, similar to that used for glue. Roll the mass, pack it in molds, and allow it to dry.

HOT GLASS A CONDUCTOR OF ELECTRICITY.—Mr. Whitehorn, of London, has discovered that glass, although a non-conductor at ordinary temperatures, becomes a good conductor at red-heat; even at 212° Fahr. it conducts some electricity; at 330° it conducts six times better, while at 570° it conducts forty times better than at 330°. It thus appears that solid and melted glass is very much like solid and melted ice in its relation to electricity; for cold, dry ice is almost or quite as perfect a non-conductor as cold, dry glass.

Vulcanized Fiber—A New Water-Tight Joint.

We have already made mention of a new and remarkable material which has been called "vulcanized fiber." The uses for this material have already become quite numerous, and a large company has been organized in New York for its manufacture, which is said to be already doing a large line of business. New uses for the material are constantly being developed. The latest novelty in this direction is a water-tight joint, which seems one of those simple improvements the value of which is apparent at a glance. This joint is described in the American Artisan as follows:

The nature of this vulcanized fiber is such that, while it is absolutely insoluble in hot or cold water, oil, alcohol, naphtha or ether, yet it expands by exposure to moisture. This property has been availed of in making this joint, which certainly accomplishes its object most effectually. The boards or planks are jointed with square edges, and at the same time grooved by a circular saw of proper thickness to any depth desired. In these grooves is inserted a tongue of hard rolled vulcanized fiber, and the boards are driven closely together. Should any water leak through the joints to the tongue of vulcanized fiber, it will cause it to expand, and pack the groove tightly, and thus arrest its further progress.

This use was discovered by Mr. E. Waters, of Troy, the celebrated paper boat builder, who has built a number of wooden skiffs in this manner, thereby dispensing with all caulking, adding greatly to the strength and stiffness of the boats, and considerably reducing their weight. He asserts (after several tests) that boats constructed in this way never leak a drop under any circumstances.

Should the boards shrink a considerable distance apart, yet so long as the tongue remains in both grooves, the joints will always be water-tight. Of course, these tongues can be made of any desired thickness and width, so as to adapt them to all kinds of structures.

It seems to us not easy to over-estimate the importance of this device, and the multiplicity of uses to which it can be applied. In addition to small boats, it will be valuable in ship-building for ceilings, bulkheads, decks, etc., and particularly for deckhouses and the light upper works of steamboats. On railroads it will be used for car roofs, water tanks and stations, and for refrigerating cars, which require to be air tight, it will be invaluable. A prominent physician has suggested that if the ceilings, walls and floors of hospitals were constructed in this manner, it would admit of their being thoroughly washed down with hose every day or two, and thus keep them perfectly free from virus, and greatly improve their sanitary condition. Even in private dwellings and business warehouses, if the floors were laid in this manner it would obviate all damage to ceilings from bursting water pipes, or faucets left running; and, in case of fire, would restrict the damage by water to one story.

We are informed that to render all the floors of a first-class four story dwelling absolutely water-proof, in this manner, would not add more than from \$125 to \$150 to the cost of the house.

The "elastic fish bolt washers," and "car box washers," or "back straps" made of this material, are now regularly used on thirty or more of the principal railroads. The works of this company are at Wilmington, Delaware.

For Wool, Mutton and Money.

Spotting Sheep.

"Spotting" sheep consists in placing the sheep's head into some stationary yoke and doctoring such spots on the sheep as can be discovered to be affected by the scab. The yoke may be made of a forked limb of a tree; or, take a 4x4 scantling and spike on two 2x4 pieces, with holes bored through the same; have a peg or bolt that can be inserted freely into these holes, so as to keep the sheep from disengaging his neck or head from the yoke after he has been placed in position. The yoke is to be set firmly into the ground or into the floor of the place where the work is to be done. Next inspect the sheep for scab thoroughly, and with a swab dipped into the "wash," rub all places that show trace of scab or even look suspicious—for it is easy to overlook a patch the size of one's hand if the operator be not up to his work. A sheep whose fleece is yet entire may be quite scabby and need only a few weeks to lose large patches of wool, yet to the casual observer there may be nothing wrong. These places in the wool are lighter colored than the balance of the fleece, and have a dried up, white appearance, that one may soon learn to detect as readily as he would were the wool off and an ugly sore formed. Either in spotting or dipping sheep I would see that all bad places, that are sore or "scabby," as the term would imply, should get an extra allowance of doctoring. Some advocate rubbing or scurfing the parts with a curry comb until they bleed. This looks cruel, but I would do it if I had any doubt that the liquid was thoroughly penetrating every part of the wool clear to the skin. I found it convenient to use an ordinary mechanical oil can filled with coal oil. With this the oil can be squirted into such places, and then a slight kneading or rubbing in with the fingers will cause it to penetrate all parts. And in fact for "spotting" sheep coal oil, if not considered too expensive, is one of the very best applications that can be used in curing scab. From this account of the process it will be seen that "spotting" is at best only a halfway plan for doing the work. I have seen open woolled sheep do quite well when treated by this method; still one is always in doubt as to its thoroughness. When scab has once appeared it is better to "dip" the sheep each spring, continuing it for a season or two after the affection appears to have been eradicated from the flock and from the range. Hence it is best to prepare at once for dipping, just as one prepares shearing pens, etc. For the new hand wants to bear in mind that, no matter how "lucky" some of his older neighbors may appear to be keeping down scab in their flocks (which, perhaps, are of common and open wool sheep), still, as the new flock goes on improving each year, and particularly of breeding up in either of the merino varieties, the owner is liable to become disgusted at times with the imperfect success of his efforts to keep down scab by "spotting."

Dipping.

"Dipping" sheep, as the term would imply, consists in submerging the whole animal in the liquid or "wash" used for the scab. For this purpose a trough or box of appropriate size is required to contain the liquid. After being dipped, the sheep is to be taken out and placed on a shelf or platform near at hand, set at such an inclination that the liquid, as it drains off the animal, shall flow back into the dipping trough. Where a large flock is to be dipped a platform or pen is usually arranged large enough to accommodate fifty to one hundred sheep at a time, the floor so inclined that the liquid which drains off them shall flow back into the dipping trough. The trough is also so arranged that the sheep may be driven through it, thus obviating the necessity of catching and holding each animal. Each shepherd has, of course, his own ideas of a pen and dipping trough, and I shall give my own for what they may be worth.—Record-Union.

S. F. MARKET REPORT.

Table with multiple columns listing market prices for various commodities including flour, sugar, coffee, and wool. Includes sub-sections for 'GENERAL MERCHANDISE', 'DOMESTIC PRODUCE', and 'FRUITS AND VEGETABLES'.

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