

the accumulation of malaria, the deadly excretion of stagnation. It will not, therefore, be deemed irrelevant to say that salt is one of the prevailing elements in the general preservation of the economy of the earth's physical vital forces as well as of animal life.

#### A NEW THEORY.

In the structure of man, the absence of salt deprives the bones of their resistant forces, so that they become unable to bear the weight of the body, are easily bent or deformed, and the rickets follow. So, also, in the absence of mineral salts from the earth's surface, its power to resist the internal heat and lateral pressure is lost, and disruption of the surface by volcanic violence ensues, corrugating and distorting the strata, and producing a mountainous country. Presuming that the arid, elevated, longitudinal regions lying midway between the Mississippi valley and the Pacific ocean would from natural causes be found less fertile in salts than those of less altitude, where streams abound and where the rainfall is sufficient to sustain vegetation, and consequently less able to resist the internal throes, and the lateral thrusts of the enveloping oceans, we have herein a clue, also, to the prevailing northerly trend of the Rocky Mountain ranges. But it may be asked,

#### WHERE DOES THE SALT ORIGINATE,

That has so strongly and strangely impregnated the Great Salt Lake? I answer, from the rivers and creeks, and salt springs pouring into the general reservoir. It is well known that what we obtain from wells and running streams, called fresh water, contains more or less salt. I divest the term salt of its technical obscurity, I might say, the metallic oxides, chlorides and alkalies enter in some degree into the component parts of all fluids and solids, from which they are separated by decomposition and carried off by drainage. And, as to the intrinsic origin of salt, might it not be here stated that common salt (chloride of sodium) is itself an excretory product of the animal, as potash salts are of the vegetable organisms?

#### NO SOLID BOTTOM OF ROCK SALT,

As some have supposed, is needed to retain the saltiness and density of the water; but, as the evaporation takes up only purely fresh water, perfectly precipitating or leaving the salts, of course the density of a body of water fed by the streams that drain a large extent of country, and having no outflow, must increase in inverse ratio to the area of surface; and this is a fact well established by the observation of all persons conversant with the effects of increase and decrease in volume of the waters of the Great Salt Lake.

I may at a future time continue some of the points suggested in this article; but have for my present purpose—that of demonstrating the absurdity of the outlet theory—already exceeded the limits intended.

J. M.

#### RAILROAD CONNECTION WITH MONTANA.

A letter on this subject, written by "Observer," a resident of Logan, Cache Co., U. T., appears in the *New North-West*, Deer Lodge, Ma., of the 9th inst., from which the following is extracted—

"Editor *New North-West*—

"Through the solicitation of a friend of mine, familiar with your people and the resources of your Territory, and who is sanguine of the great wealth of the latter now dormant, and which he says can only be developed and utilized through the agency of cheap and speedy transportation, I submit respectfully a few items which I trust may be of some interest to the readers of your valuable journal.

"The people of Montana appear now to be awake to the importance of speedily securing for themselves railroad connection with the States and some of the Territories of the Union. How to secure this readily and by the expenditure of the least possible means is a question of importance, and as such should receive the careful consideration of your wise financiers, aided by the profound judgment of your statesmen; for in the successful accomplishment of the end desired lies, with-

out doubt, the future success and prosperity of your Territory and her people. Railroads when constructed and operated in new countries have always, I believe, resulted in great good to the citizen, in that labor receives employment, and wealth, before dormant, secures the direct means of development; for the investment of capital in our mines goes hand in hand with the extension of railroads or other means of cheap and speedy transportation.

#### EFFECT OF A RAILROAD IN CACHE VALLEY.

"To show that such can be legitimately counted upon in the development of new countries by railroads, I submit a few items with which I am personally familiar: In March 1872 the first spike was driven on the Utah Northern Railroad. The promoters of the enterprise were not ignorant of the magnitude of the carrying trade of your Territory, and their judgment was then, and I believe is still, that it is sufficient to make a paying business for a three feet gauge road whenever such shall have been completed and operated to some central point in your Territory. They had hopes of the local traffic of the line as it progressed, but they had nothing upon which to base a reliable calculation, for the people of Cache Valley had then comparatively little, if any carrying trade; they had no coal fields, no mines, no lumbering interests and their consumption of imports was very limited indeed. And without the means of cheap transportation they were.

#### COST OF TRANSPORTATION.

"Allow me to suppose that the people of Montana annually import 2,000 tons of merchandise, machinery &c., at an average cost for transportation from Ogden, Utah, or from some point on the Missouri river, (the cost being equal beyond) of \$100 per ton. This would aggregate \$200,000. With a railroad complete this would not exceed \$40,000, saving \$160,000. Suppose you export in ores and bullion 2,000 tons, at average cost of \$30 per ton. A railroad could carry the same for one-third and save \$20,000. Again, suppose you expend in through passengers per annum \$50,000. A railroad could carry the same passengers for one-third, saving \$33,334. These three items, evidently understated as to the amount of your traffic, would produce with railroad transportation as against your present mode a net gain or saving of \$123,334. Now who pays these freight charges? I answer, the people of Montana Territory. The consumers, whether they be miners or agricultural laborers. You, Mr. Editor, help to foot the bill on the cost of every sheet of paper upon which your issue appears and upon every pound of material used by you. There is not a pound of anything used in your Territory which has been imported that does not directly bear its portion of this direct tax; I say direct because it is collected daily.

"Now suppose your people, understanding the situation, determine through the Legislature to 'speculate' by voting the issuance for railroad subsidy purposes of \$3,000,000 in Territorial bonds, bearing 7 per cent. interest per annum, or a sum of \$210,000 to be paid yearly from the unincreased present taxes of the people, now paid annually in the partially disguised form of excessive freight rates. The speculation would simply net them, if these figures be correct, \$13,334 per annum. As to the payment of the principal I need only say that the increase in the valuation of property taxable, to say nothing of the revenue in that regard to be had from the road itself, would in less than twenty years pay it three times over. In conclusion, permit me to state, without any fear of successful contradiction, that a three feet, or commonly designated 'narrow gauge road' when constructed on ordinary grades has sufficient capacity to carry in the same length of time all the traffic that has ever passed over the U. P. and C. P. Railroads and much more."

A RAILROAD MEETING, &c.—The Helena, Ma., *Independent*, of April 11th, says—

"Pursuant to notice, the citizens of St. Louis, Jefferson county, Montana, held a railroad meeting April 8th, 1875, for the purpose of electing one delegate to attend the rail-

road convention to be held at Helena on the 21st inst., when the following preamble and resolutions were adopted:

"Whereas, Believing the Territory of Montana to abound in mineral and agricultural wealth equal, if not superior, to any of the neighboring Territories; and believing, also, that railroad facilities will develop our resources, thereby inducing emigration and capital to come to us, and believing that the time has come for decisive action; therefore

"Resolved, That we add our voice to the call for a general uprising of the people on this great and important question.

"Resolved, That it is the duty of our representative to first consider the claims of that road which can add the most wealth and population to our Territory.

"Resolved, That we favor a liberal, yet reasonable, subsidy.

"On motion, James S. Smith was elected delegate, and John Murry alternate.

"S. P. ROMANS, President.  
"W. L. MOORE, Secretary."

The same paper, speaking of the present rush of emigration from the east to the west, says—

"The rush of immigrants to Nevada since the promulgation of the stories of the great bonanza is beyond precedent. Even the 'flush days' of '59 and '60 are now outdone. There are about 20,000 of these new arrivals in and about Virginia and Gold Hill, not one-fifth of whom can obtain employment at any price or at any kind of labor. The land is literally overflowing with population.

"Montana just now needs the services of all industrious persons to build and run manufacturing establishments, cultivate her soil, and develop her mines. She offers superior inducements to immigrants, and those who settle here will find themselves far better off in five years than those who seek homes where the Pacific laves the western shores of the continent."

#### Death of a Horse that Won More Money than Any Other Horse that Ever Lived.

The famous English race-horse Thormanby, sire of the winner of the Derby in 1860, died suddenly of heart disease at Newmarket, on Feb. 28. At two years old he won for his owner in stakes alone upward of \$18,000, having started fourteen times, and won nine races, and been placed either second or third in the remaining five. His trainer felt confident in his ability to win the blue ribbon of the turf on the Epsom Downs, so well had the colt done throughout the winter, and this hope was realized, for he won the Derby easily by a length and a half from Wizard, who had won the 2,000 guineas, and was the favorite at starting. Mr. Merry had backed his horse so heavily, and on such good terms, that he won between \$400,000 and \$450,000 on the race. The horse was seized with strangles the day after the Derby, and was not in condition again all the season—running unplaced to St. Albans in the St. Ledger, and being beaten by Sabreur in the Doncaster cup, by the Wizard in the Grand Duke Michael stakes, and by Tom Bowline in a 500 sovereigns sweepstakes.

At four years old he won the Claret stakes and Ascot cup, beating Umpire, Thunderbolt, St. Albans, Fairwater, Parme-an and others and was beaten by the American horse Starke, to whom he was conceding fourteen pounds in weight and two years in age, for the Goodwood cup. This was his last race. He sired Planet, Sunshine, Lady Coventry, Thorwalden, Hester, Camel, Atlantis, Atlantic (the 2,000 guineas victor last year,) Tomahawk, Cashmere and many other distinguished winners. Two of his produce came to this country—By the Sea and Glengary. The former is running successfully in Peru, South America, and the latter is at the stud in South Carolina.—*Ex.*

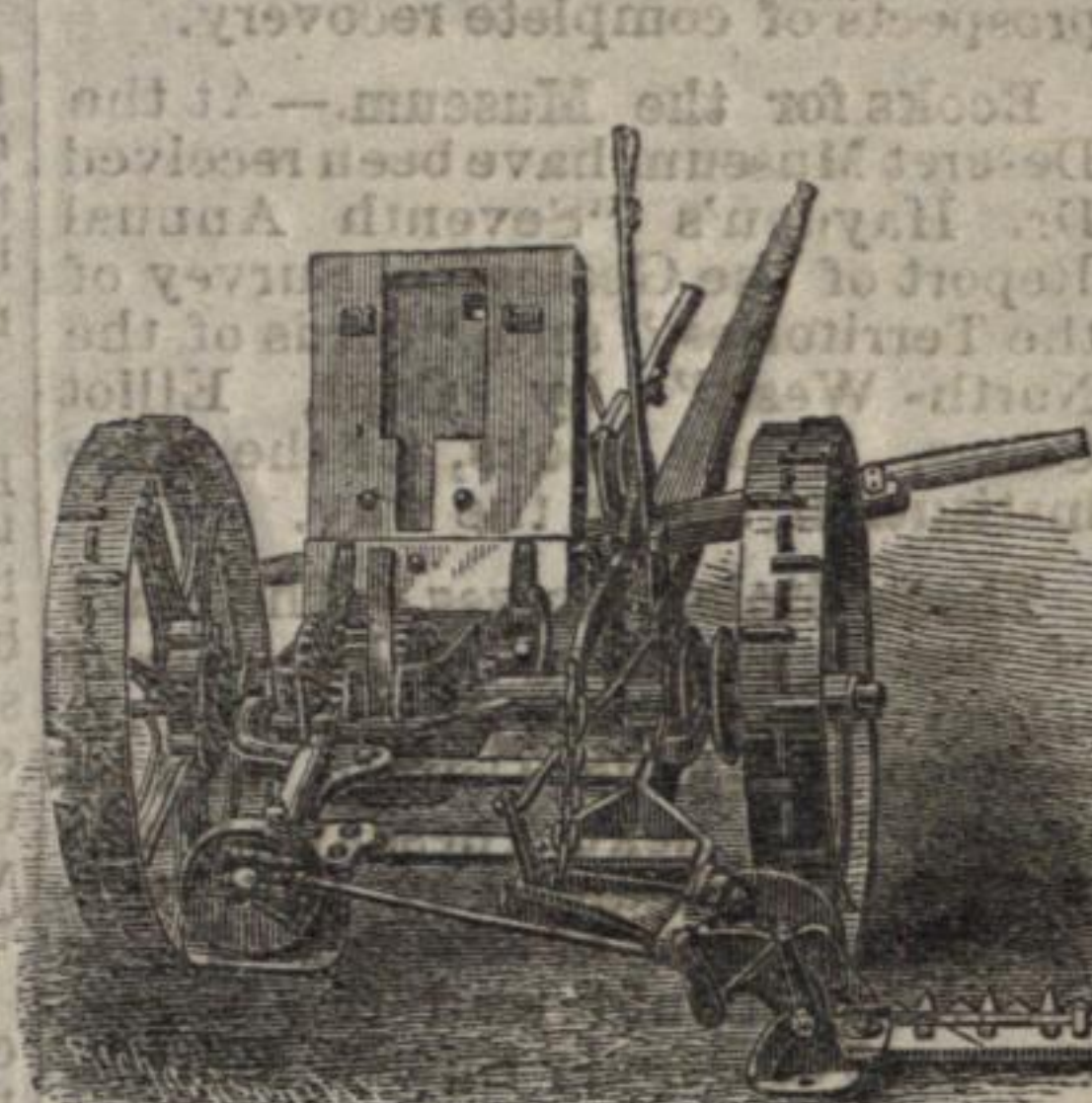
WE would call the attention of our readers to the advertisement of Walker Brothers, to be found on another page of this paper. Persons visiting the city during Conference should not fail to give them a call, for Walker Brothers have the largest and cheapest stock of goods in Utah.



Mower at Work.



Mower Folded.



Showing Gearing.

The above cuts represent the celebrated **Cayuga Chief Mower and Reaper**, manufactured at Auburn, N. Y., by the **Cayuga Chief Manufacturing Company.**

The new Machine, No. 6 Combined, possesses all the advantages of the other Cayuga Chiefs in their most improved and popular form, as heretofore constructed; the leading features of which are arranged and combined in the most desirable, compact and symmetrical form, making it superior to anything of the kind heretofore produced. MR. WHEELER, whose name as an Inventor and Patentee is familiar not only to manufacturers of Reapers and Mowers, but to the agricultural community generally, has spent twenty-one consecutive seasons in the harvest field in experiment. For the past two years he has devoted his whole time to the organization and test of this Machine, which embraces all the most important and valuable improvements heretofore made and patented to him, combined in the most simple, substantial and symmetrical form, with other improvements made by him, which by practical and thorough test in the field, under his inspection and supervision, have proved valuable and successful.

In introducing them to the farming public of the Far West, we desire to call attention to some of the important features of these Standard Machines, and ask an examination of the same by all who contemplate purchasing a Mower or Combined Mower and Reaper the ensuing season, being satisfied that inspection will lead to a sale.

An examination of the Machine will show that the main or driving wheels are of large size, and are placed further apart on their axle than usual, giving the machine greater steadiness when in use, especially on rough, uneven ground.

Two frames are employed in the construction of this machine, and the same system of gearing as used in the other Chiefs, but it is arranged centrally in the frame, which serves also to shield and protect it.

The lifting devices for the finger bar are the most perfect and effective. The *Cutting Apparatus*—a very important feature—is entirely different from all others, and its advantages will be apparent on inspection. Its *Folding Arrangement* as shown in cut is the only convenient mode of transportation by which the machines can be perfectly balanced, perfectly safe, and can be driven ANYWHERE A TEAM CAN GO.

As a Reaper it has a light, compact platform, which can be quickly attached to or detached from the Machine. The Self-Rake used is the same popular Wheeler Rake, so long and successfully in use on our other Machines, and is entirely different from any other in use. In its application to this Machine, all its valuable features are retained, whilst its application is so simplified that it requires but a few moments to attach it to or detach it from the Machine. Two eye bolts serve to hold it in place, by clamping it to the pivot pins of the main shoe. These have simply to be loosened to remove it from the shoe. By the location of the Rake upon the shoe, and the hinging the shoe to the cutter frame, the platform wheel has no part of the weight of the Rake to carry, thus overcoming the difficulty experienced in Machines when the large shoe is located outside of the road wheel by the great weight carried on the platform, causing it to sag and the Machine to run hard, with often severe side draft. The platform is readily adjusted to cut at different heights, and is the most durable platform made in America.

The Gearing as shown by the cut is arranged in the centre of the Machine, in a compact and simple manner, being completely enclosed, thus protecting it from all dirt and grit. Every part of the Machine is duplicated, and tons of extra parts are now on hand at the different agencies in Utah.

LOOK TO YOUR INTEREST, and before purchasing a Mower or Reaper, or Horse Rake, call on or address Mattison & Johnson, Agents for Wyoming, Utah, Nevada, Idaho and Montana, **L. E. MATTISON, Salt Lake.**  
**A. J. JOHNSON, Ogden, Utah.**

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Cash paid for Grease and Tallow, and also for boxes returned.

Our Soap is sold in all the Co-operative Stores in the Territory and at the Factory. Orders addressed to John South, Assistant Secretary, P.O. Box 716, will receive prompt attention.  
**A. H. RALEIGH, Prest.**  
**A. W. CARLSON, Secty.**

#### NOTICE.

TO BENJAMIN F. BUTLER, or to whom it may concern, take notice: That I, M. T. Gisborn, have done work on the Silver Tail Mine, Ophir Mining District, Tooele County, Utah Territory, to the amount of sixteen hundred (\$1600) dollars, and your share amounts to four hundred (\$400) dollars, and if you fail to pay your portion within ninety days, your interest in the said mine will be forfeited by operation of law.  
**MATT. T. GISBORN.**  
Dated Ophir City, March 3rd, 1875. w6

#### NOTICE.

TO John Sullivan, George T. Henry, J. H. Walker, Daniel Driskel, Charles Adler, or to whom it may concern, take notice: That we, Frank Worthing, Michael Enright and John Gillooly have done work on the Harrington Mine, Ophir Mining District, Tooele County, Utah Territory, to the amount of four hundred and sixty (\$460) dollars, and your several shares amount to two hundred and twenty-five (\$225) dollars, and if you fail to pay your portion within ninety days, your interests in the said mine will be forfeited by operation of law.

**FRANK WORTHING,**  
**MICHAEL ENRIGHT,**  
**JOHN GILLOOLY.**

Dated Ophir City, Feb. 25th, 1875. d84