knowledge concerning the productive causes or the creative forces which, by their action, gave these important productions as a result and until this can be more positively established and is better understood, all discussions and conclusions in regard to the magnitude or permanence of the supply must be problematical and unsatisfactory. Our own opinion, in regard to this matter, is that the creative forces of nature are ever present and ever active; that the creative period is never ending, and wherever favorable circumstances exist the union of chemical elements, according to established laws and affinities, will unite and produce their diversified product and results.

"Since the days of '49," writes an authority, "prospectors have mistaken mica, or 'fool's gold,' for gold itself. Mica, in nature, is very abundant; it is met with in every camp; we are brought face to face with it in every mountain range as its forms are of three constituents of which granite is composed (mica, quartz and felspar). It is also a prominent constituent in granite, gneiss, and mica-schist. We find it again in our soil, formed from the disintegration of the above named rocks. From a mineralogical standpoint, common mica is called 'botite,' which is a magnesia-iron mica, part of the alumina being replaced by sesquioxyd of iron, and protoxyd of iron and magnesia existing among the protoxyd bases. Black is the prevailing color, but brown, green, yellow to white also occur. Prisms, commonly tabular; often in desseminated scales, sometimes in massive aggregations of cleavable scales. The hardness is 2.5 to 3. Now note the specific gravity, which ranges between 2.7 and 3.1: while that of gold raises from 15.5 to 19.5; according to its purity. In countries where mica-schist abounds, yellow mica in the sand is very abundant, and often deceives the eye of the prospector in his search for gold. This silvery and golden mica in scales is the 'cat-silver' and 'cat-gold' of Mediæval Europe. Others mistake iron and copper pyrites for gold, and arsenical pyrites are mistaken for silver; this last, in fact, is a very common mistake, even in old camps. Gold is sometimes found in a finely divided condition in pyrites, but vast masses, or perhaps it would be better to say mountains, of it in California and Colorado do not carry a trace of gold. Pyrite or bi-sulphuret of iron is very brittle; its hardness is about 6.5, while that of gold is 2.5. It occurs commonly in cubes, usually of a brass color. The cubic faces are often stricted, with strictions of adjoining faces at right angles. Chalcopyrite is a double sulphurate of copper and iron of a brass-yellow color and metallic lustre; on exposure to moist air it becomes iridescent on its surface. It is easily scratched with a knife, giving a greenish black powder. It is the principal ore of copper at the Cornwall mines. Arsenopyrite or mispickle has a hardness of 5.6, and is very brittle; of a metallic lustre and a silvery-white to steel gray color. This metal occurs in small particles in the partly oxidized ores of this camp, and is very often mistaken for silver. Pyrites, being brittle, are readily reduced to powder before the blow of the hammer, while gold and silver in their native state will flatten."

As much as the miner may oppose the scientist and the school-taught expert, there is much reason for a larger increase in knowledge in every branch of mineralogy and metallurgy. The history of the loss and waste in connection with mining operations and ore treatment during the past few years, when its immense magnitude is fully comprehended, will not prove to be a very strong support in favor of the methods that have prevailed, or the management and skill of those directing them. Those who more fully comprehend the question, clearly understand that a union of practical and theoretical knowledge is most to be desired, and that neither the theorist and student, or the practical miner or mill man, can afford to ignore the other. Every increment of knowledge, from whatever source, or however gained, is an additional element of power to be used in the accomplishment of any purpose. The wider the range of information, the more comprehensive the understanding, the deeper the insight and investigation, so much better fitted and more valuable is the possessor to accomplish the best results in the most economical manner. It is more than probable that some mistakes and some losses have accrued from the inexperience of scientists and experts, but the mining territory from Alaska to Mexico is covered with the monuments of inexperience and ignorance, erected at a vast expenditure of time and money, by men claiming to be practical. Practically, notwithstanding the wonderful results, the mining territory has been one vast scene of costly experiments; and to-day even the present methods, as great as is their improvement over those of the past, are by no means creditable to the intelligence and advancement of this century, as shown in the activities of every other industry. We stand, as yet, upon the threshold of improvement in this direction, where such methods and appliances prevail that would ruin any other business not so prolific in resources. The bleaching bones of thousands of enterprises lost in this desolate desert, and the stagnation that hangs like a gloom over so many promising localities, the indifference of capital to the most alluring stories of glittering wealth, the lanquishing camps that appeal in vain for assistance to open the treasure-houses within their limits, all show the uselessness of attempting to proceed by old methods; and the imperative necessity for a wiser management, a more comprehensive knowledge, and the inauguration of new methods in developing the vast mineral resources of our country; which will some day, when these questions are practically met, give results that will astonish and outshine the most flattering and wonderful statements yet recorded in the history of this great industry.—*Chicago Mining Review.*

Miners returning from the Lorne Creek mines, B.C., report a very unfavorable season there owing to the continued high water.

Phosphate Shipments from Montreal for Season of 1886.

Date.	Shippers.	Ship.	Destination.	Tons.
May 22	Wilson & Green	S. S Oxenholme	Liverpool	387
" 22	Lomer, Rohr & Co	"	"	350
June 5	Wilson & Green	Bq. Rhine	London	220
" 4	" "	S. S. Ashton	Sharpness	290
" 10	" "	Bq. Dictator	London	140
" 11	Lomer, Rohr & Co	S. S. Lake Leman	"	500
" 12	" "	S. S. Berbice	Liverpool	100
" 19	" "	S S M. Bedington	London	350
" 26	" "	Brig. Move Rose	"	95
" 26	" "	S. S. Carmona	"	400
" 30	Wilson & Green	S. S. Benbrac	Liverpool	416
July 2	Lomer, Rohr & Co	S. S. Cairo	London	157
" 7	" "	S. S. Oxenholme	Liverpool	765
" 13	Wilson & Green	Bq. M. E. Seed	"	523
" 13	" "	Bq. M. Mitchell	"	150
" 15	Lomer, Rohr & Co	S. S. Benison	"	260
" 22	" "	S. S. Erl King	London	330
" 24	Wilson & Green	S. S. Dracona	Avonmouth	492
" 30	Lomer, Rohr & Co	S. S. Acton	London	535
Aug. 4	Wilson & Green	S.S. River Judus	Liverpool	597
" 4	W. M. Knowles	"	"	189
" 7	Wilson & Green	S. S. Juliet	London	170
" 10	" "	S S. Kehrweider	Hamburg	590
" 9	Lomer, Rohr & Co	S. S. Benacre	Barrow	225
" 11	W. M. Knowles	S. S. Bonhope	Liverpool	276
" 12	Lomer, Rohr & Co	S. S. Carmona	London	150
" 14	" "	S. S. Crete	"	332
" 19	" "	S. Princess	Liverpool	310
" 20	" "	Bq. Fergerson	London	252
" 20	Wilson & Green	S. S. Cononbury	"	220
" 20	Lomer, Rohr & Co	"	"	230
" 21	" "	S. S. Oxenholme	Liverpool	630
" 25	" "	S. S. Plessey	London	480
" 26	" "	S. S. Benbrac	Liverpool	435
Sept. 1	R. C. Adams	Bq. M. C. Smith	Belfast	72
" 1	R. C. Adams	S. Panthia	Liverpool	253
" 1	Lomer, Rohr & Co	"	"	150
" 1	W. M. Knowles	"	"	225
" 3	Gillespie & Moffatt	S. S. Emiliau	"	57
" 3	Lomer, Rohr & Co	"	"	100
" 3	Millar & Co	"	"	125
" 3	Wilson & Green	"	"	260
" 6	Lomer, Rohr & Co	S. S. Dunholme	London	360
" 8	Wilson & Green	S. S. Clare	"	224
" 18	Lomer, Rohr & Co	S. S. Cotherston	"	400
" 18	" "	S. S. Grafton	"	235
" 24	" "	S. S. Berbice	Glasgow	95
" 29	" "	S. S. Fernholme	London	150
Oct. 6	" "	S. S. Concordia	Glasgow	215
" 9	" "	S. S. Oxenholme	Liverpool	525
" 9	W. M. Knowles	"	"	230
" 12	Lomer Rohr & Co	S.S. Windraham	Antwerp	150
" 13	" "	S. S. Burton	London	381
" 21	" "	S. S. Erl King	"	190
" 22	Wilson & Green	S. S. Phœnician	"	600
" 26	Lomer, Rohr & Co	Bq. G. Metzler	Belfast	95
Nov. 3	" "	S. S. Alcides	Glasgow	160
" 3	Wilson & Green	"	"	355
" 3	Lomer, Rohr & C	S.S. Ocean King	London	205
" 6	" "	S.S. Gothenburg	"	295
" 6	Wilson & Green	"	"	227
" 10	Lomer, Rohr & Co	S. S. Burnwall	Antwerp	145
" 15	" "	S. S. Carmona	London	290
" 17	Wilson & Green	S. S. Scotland	"	310
" 19	Lomer, Rohr & Co	S. S. Montreal	Liverpool	150
" 16	R. C. Adams	"	"	265
" 20	Wilson & Green	S. S. Inverway	Sharpness	180
" 20	Gillespie & Moffatt	"	"	19
		Total shipments for 1886		18,972

GROUND IN BAGS.

May 12	W. M. Knowles	S. S Kehweider	1,560
Sept. 17	Lomer, Rohr & Co	S. S. Scotland	200
		Total bags	1,760

Iron Amnong the Ancients.

Iron was first used in Western Asia, the birthplace of the human race, and in the northern parts of Africa, which are near to Asia. The Egyptians, whose existence as a nation probably dates from the second generation after Noah, and whose civilization is the most ancient of which we have any knowledge, were at an early period familar with the use and manufacture of iron. Iron tools are mentioned by Herodotus as having been used in the construction of the pyramids. In the sepulchres at Thebes and Memphis cities of such great antiquity that their origin is lost, butchers are represented as using tools which antiquarians decide to have been made of iron and steel. Iron sickles are also pictured in the tombs at Memphis, and at Thebes various articles of iron have been found which are preserved by the Historical Society at New York, and are probably three thousand years old. Thothmes the First, who is supposed to have reigned about seventeen centuries before Christ, is said in a long inscription at Karnak, to have received from the chiefs, tributory kings, or all of