would be about 13% more than the principal. But if only 10% of the share capital was paid in the profit would be over 100% on the investment beyond the repayment of capital.

Taking the whole list of 293 mines the total capital is $1,164,000,000, and the total assessments $85,000,000=$1,249,195,066. Total dividends are only 20% of this amount. If 25% of the capital has been paid the total dividends would be 60% of the outlay. If only 10% was paid, 118% of the outlay would have been returned. Some eminent authorities, whom I have consulted, tell me that probably not more than 10 cents on the dollar of the capital has been paid in on the average.

When we consider the large number of mines that are abandoned before they are turned over to companies, and of the prospects that never become mines, but are spoiled in development, besides the great expenditure made in the unsuccessful search for minerals, we are forced to accept the common statements that more money is put into the ground than ever comes out of it, and that every dollar costs a dollar. Indeed many assert that dollars, whether silver or gold, cost at least two dollars apiece, and Mr. Del Mar has stated that every dollar secured from the Comstock Lode has cost five dollars. It was often said there, as in other less favored districts, "It takes the product of one mine to work another."

CAPITALIZATION OF MINES.

Of these 293 listed mines in the United States, 223 have a nominal capital of a million dollars and over, and of these 70 are capitalized at $10,000,000 and over. But the capital stock gives no idea of the amount of money actually paid in. It is customary in California to capitalize the companies at ten million dollars and sell the shares at one cent or ten cents on the dollar or even give them away, anything in fact to get them into the hands of people who will pay assessments.

The U. S. census of 1880 reports 140 mines whose nominal capital is $1,019,111,250, but whose market value is $85,641,222, or about 12 cents on the dollar, but even these prices were probably inflated above the true values.

The last U. S. Census gives some important data:

In 1889 the value of production of gold and silver was	$99,283,732
The operating expenses were estimated at	63,451,136
Leaving a surplus of	$35,832,596

The capital invested was $486,323,338 so that the profit was about 7¼% on the investment. But when the short lives of mines is considered and the consequent deterioration of capital is taken into account, this showing must be regarded as proving that mining for the precious metals does not pay on the average.

Of 6,004 mines that are known 1,266 were idle; 1,009 were working, but non-productive; 1,610 were producing less than $1,000 per annum; 1,408 were producing less than $10,000 per annum; 437 were producing less than $50,000 per annum; 95 were producing less than $100,000 per annum; 107 were producing less than $250,000 per annum; 44 were producing less than $500,000 per annum; 28 were producing over $500,000.

SUCCESSFUL MINES.

Leading the list of the United States comes the Calumet and Hecla Copper Mine, which, with a share capital of $2,500,000 and paid assessments of $1,200,000, has paid in dividends $40,850,000. Then come in order the Ontario Silver Mine, Utah, with total dividends of $13,175,000; Granite Mountain, silver, Montana, $12,120,000; Quincey, copper, Michigan, $7,070,000; Idaho, gold, California, $5,489,000; Homestake, gold, Dakota, $5,237,500; Eureka Consolidated, silver and gold, Nevada, $5,112,500; Richmond, silver, Nevada, $4,359,887; Horn Silver, Utah, $4,930,000; the Tamarack, Standard and Small Hopes Consolidated have paid over $3,000,000, and the Daly, Minnesota Iron and Plumas Eureka over $2,000,000.

California from 1848 to 1881 produced $1,163,000,000 in gold and $15,000,000 in silver.

The yield of the Comstock Lode in Nevada from 1860 to 1890 was $350,000,000 and $130,000,000 were paid in dividends. The bulk of this was produced during the first 15 years. The original purchasers of the Comstock paid $50 for three-fourths interest and bought the other quarter for an old blind horse. One of the mines, the Virginia Consolidated, paid $42,930,000 in eight years, and the California paid $31,320,000 in five years. The original discoverers, as usual, got no benefit. This summer a car load of ore from the Mollie Gibson Mine at Aspen, Colorado, yielded 20,000 ounces of silver to the the ton, or 85%. More than four-fifths solid silver.

Did time permit, similar stories could be told of mines in Australia and South Africa. An expert sent out by the Rothschilds to Witwatersrand reports that one billion dollars in gold is available in that district, and one of the newly discovered mines in Coolgardie, Australia, is reported sold for £250,000.

Australia in 1852 produced $79,200,000 in gold, and in 1853, $50,400,000. Two gold nuggets were found worth $42,000 and $48,000. In California single nuggets have been found worth up to $30,000. One claim on Carson Hill had a vein from which gold was chiselled out in big chunks, one weighing 112 pounds, a single blast gave $110,000, and the yield in two years was $2,000,000. Many miners working single handed washed out from $100 to $1,000 a day. Three sailors on Murderer's Creek got 11 pounds daily and $2,700 has been washed from one pan. The Doran Mine in South Carolina yielded $300,000 from a space 300 feet long by 2 feet and 15 feet, the excavation of which should not have cost $20,000.

Canada is not without its stories of bonanzas. The early history of the Cariboo and Fraser River Districts in British Columbia abounds in stories of sudden fortunes; and the great hydraulic operations now in progress produce results that promise yields in single workings of $1,000 a day. The greatest yearly gold production of British Columbia was $3,913,563 in 1863, but this had declined to $399,525 in 1892. The highest average earnings per man in one year were $1,223 in 1875. The earnings for 1892 were $298 per man employed, or about $1 per day.

In Nova Scotia there have been some brilliant successes in gold mining, and a steadily productive and fairly remunerative industry is being carried on. The yield of gold for 1892 was 21,080 ounces, and the yield for nine months in 1893 was 14,030 ounces representing 97,471 days' labor, or an average of nearly $3 per day per man employed. The total yield of gold was about $10 per ton of rock crushed.

In the Chaudiere District of the Province of Quebec there has been some remarkable finds of gold in the streams, and if titles could be made clear and proper methods employed some large fortunes might be realized

The story of Silver Islet gives the greatest romance of Canadian mining. The original owners became discouraged and sold it for a moderate sum to United States capitalists. These prosecuted the development on a large scale and were rewarded by striking extensive deposits of ore that were often almost solid silver and for a time yielded an immense revenue.

In Hastings County, Ontario, there are gold-bearing rocks that are destined to realize fortunes to investors when the chemical secret is discovered as to a means of overcoming the effect of arsenic in the amalgamation of ores.

The nickel mines of Sudbury produced in 1892 2,413,717 pounds of nickel and 2,203,795 pounds of copper, and one of the companies is paying a dividend of 8% per annum on a capital of $2,500,000.

SPECULATION.

As good an illustration as can be had of the chances of investment in mining shares is furnished by the history of the dealings on the San Francisco Stock Exchange. "Crown Point" in November, 1870, sold at $3.00 per share. On favorable reports it advanced to $1,800. Other mining shares rose in proportion and all California went wild. In 1872 the crash came and silver stocks declined $60,000,000 in ten days. A friend of mine who could have sold out his holdings for $800,000 but who was determined to become a millionaire ended $60,000 in debt, with a lawsuit on his hands.

In 1872 Virginia Consolidated began paying dividends of $300,000 monthly. An expert said there was $1,500,000,000 in sight in the two mines, Virginia Consolidated and California. Shares rose from $4 to $780 and were maintained with some fluctuations for a considerable time. In 1875 Virginia Consolidated produced $15,000,000 in seven months. Then came a decrease in production and Comstock values sank $100,000,000. The Bank of California failed, and Rolston's body was found in the sea. In January, 1875, the market value of Comstock shares was $300,000,000. In the spring of 1885 it was $2,000,000; in the autumn it rose to $70,000,000, and in 1890 it was $6,000,000. Stock that sold for $700 in 1875 sold for 25 cents in 1885. During the excited dealing in shares in 1872 one man made 25 millions, another 20 millions, and two others 10 millions each.

Placer and hydraulic mining is now receiving much attention. After the first outlay is made the average cost of washing one ton of gravel by hydraulic process is three to ten cents, whereas the cost of mining and milling the most favorable free milling gold is one to two dollars per ton and is often nearer five dollars; and the mining and treatment of silver ores sometimes runs up to $100 a ton, and is seldom under $20. The first outlay for hydraulic mining is usually heavy and the cost of 154 ditches in California was an average of $70,000 each, or $3,800 per mile.

As to the profits of mining in the present day it should be said that there are numbers of small companies in California and other States that are paying from $1,000 to $40,000 a month. They are usually each controlled by a few people, who are looking for results from legitimate mining rather than from stock speculation, so there are no puffs in the papers and one rarely hears of them. Probably the number of mining properties that are being worked by individuals or close corporations far exceeds those that are listed upon the stock exchanges.

No estimate can be made of the amount of money expended in prospecting and developing mineral properties, yet the money expended in these preliminary operations should be considered when reckoning up the profits of mining as a whole. There has been a thousand prospectors at one time ranging the mountains of the Kootenay District (B.C.), and it is safe to say that more than a million dollars has been spent in the last three years in exploring and developing the Slocan District alone, whereas the ore is only now beginning to go to market in appreciable quantities and no mine has yet repaid its outlay.

During the palmy days of California $60,000,000 were produced in one year. But 100,000 miners were employed and the average output was only $2 per day per man, while wages were $4 and $5 per day. This shows that although many made fortunes, more made little or nothing. Mining is a lottery with few immense prizes, numerous moderate gifts and a multitude of blanks. The losses in mining are often due to other causes than bad luck. Managers on the Comstock built mills and reduced ores at a cost of $15 per ton, but charged the other shareholders $14, which was often as much as the ore produced. Law suits and disputes about titles have been a fruitful source of the loss of time and money. One law suit between the Ophir and Moscow mines on the Comstock Lode cost $1,070,000.

A great hindrance to profitable mining in Western Canada is the fact that while supplies can best be obtained from the United States and that the market for ores is mainly in that country, the policy of the Canadian Government has been to maintain the tariff on these supplies and to prevent the development of railway communication with the South.

The high rate of wages in the West, $3.50 per day, and the excessive cost of transportation are causes for many mining failures.

There are two classes of investors in mines. The first class is composed of those who invest, hoping for profit from the sale of the property or its products. The second class consists of speculators who buy mining shares for a rise. The investors in public companies in England are usually of this second class, and most of the companies that are promoted are organized for the purpose of gambling in the shares. The promoters employ brokers to buy and sell shares on the stock exchange until the outside public are attracted. When the prizes have been forced to a suitable point, or to where it is thought they will not go higher, the original holders unload their shares.

To those who wish to speculate in mining shares, this advice may be given. Select some company that has great names in the directorate and is under the management of some well known, successful financial firm. Do not concern yourself too much about the merits of the mine, for if you are an outsider you have no chance of learning the truth about the value of the property. Content yourself with following the lead of men who are good "boomers" and who have a strong interest in "whooping up" the enterprise. Consider that the probability is that the affair is a swindle and will eventually be a dead loss to the shareholders. Therefore when the shares advance sufficiently to afford a good profit, do not hold on too long, but sell out before the downward turn comes.

To those who wish to invest in the legitimate mining industry for the sake of dividends from the operations, the following general rules may be given: Avoid the companies with showy names, heavy expenses of management, large capitalization or where large amounts are paid for the property. Favor investment with men of whose trustworthiness you have personal knowledge, or whose skill in mining has been proved. When you can "get in on the ground floor" with such men "take a flyer," if you have any spare cash to lock up and will not be distressed if it is lost. If you know some good practical prospecting miner, who is ready to explore in some district of good repute, "grub stake" him, that is put up the money for his expenses and go halves with him in his discoveries. You cannot expect to be able to form any accurate judgement of the value of a mining property unless you have a thorough familiarity with the business. If you visit the mine you will only see a hole in the ground and will know no more of its productive capacity than you did before. Your investment must be made usually upon the basis of personal confidence in the managers of the enterprise or the reports of your professional advisers.

From the consideration of the facts and figures which have been mentioned, it may be assumed that mining on the average is not a very profitable undertaking, that is, more money is put into the ground than ever comes out of it. But many enter-