turer in palpitating over the relationship of supply to demand, and both to dividends. A good deal of interest—not to say jealousy—has been awakened amongst the existing companies by the formation of a private company to work newly discovered deposits of asbestos in Griqualand, Cape Colony. The leading men in this concern are connected with the De Beers Diamond Mines, and the competition of South African asbestos with the Italian and Canadian is not, therefore, likely to weaken through want of sufficient capital. Moreover, it is claimed for this new fibre that its specific gravity is quite 25 per cent. less than the other varieties. Thus, at the same figures, Cape asbestos would be a great deal cheaper than its competitors. Moreover, it does not require any heavy expenditure to mine, as the deposits are nearly denuded, and all that is required is to blast it out of the ground with dynamite and load it into trucks. The Italian and Canadian asbestos mine-owners may, however (says the *London Mining Journal*), find several crumbs of comfort against this threatening competitor. In the first place the cost of transport in South Africa is a heavy item, and then, again, the shipping charges to Europe will fall heavily on the raw material. On the other hand, the consumption of the raw material is extending in all directions. It is used nowadays, we believe, for the filiments in incandescent electric lights, and threatens almost entirely to supersede cement as a material for coating steam boilers. Asbestos mill-board, cloth, &c., also may very likely come into enormous vogue for general packing and other purposes, There ought, therefore, to be plenty of room for the addition of South Africa's production to the existing supply The position may be changed if it is true, as we hear, that extensive and very valuable deposits have lately been discovered in Italy by persons quite independent of the large capitalists, who have hitherto practically controlled the supply of the mineral. If Italy really possesses mines equal to those of Canada for the workable qualities of the fibre, a revolution may quite possibly be impending in the position of asbestos."

But then Italy does'nt. Furthur the inferiority of the Cape asbestos in comparison with the Canadian product is so marked that the Canadian operator may regard its prduction with indifference.

Dr. David T Day, Chief of the Division of Mining Statistics and Technology has issued his annual volume of the Mineral Statistics of the United States for the year ended 31st December last. As usual a mass of valuable information is given respecting the progress of mining and the industrial conditions affecting the production of minerals in that country. The report is one of the most valuable of the many useful publications issued by the United States Geological Survey and we, in common with a large number of our readers, who constantly refer to it, would be sorry indeed to see it stopped. We have no sympathy with the *Engineering & Mining Journal* which for reasons of its own, personal, professional and pecuinary, would, judging by recent utterances, fain see the work abandoned in favor of its own pretentious but far from reliable annual compilation. Quoting from Dr. Day's work we learn that; "The total value of the mineral products of the United States in 1893 was the smallest since 1889. It represented $609,821, 670, compared with $688, 616, 954, in 1892; a decline of 11.44 per cent. In 1892 there was an increase of 30½ millions or 4.67 per cent. over 1892. The decline in value was most conspicuous in pig iron and structural materials, but most other minerals declined in the amount and the value of the product, the exceptions being gold, anthracite coal, aluminum, phosphate rock and gypsum. Bituminous coal showed a slight increase in quantity but the normal increase was checked and the total value was less than in 1892. Petroleum increased in value but decrased in quantity. Salt, quicksilver, and many smaller products increased in quantity but shared the usual decline in value. This general decline was attributed to the financial depression and the consequent decreased consumptive demands. It was only conspicuous during the last half of the year, as considerable time is necessary for affecting the mining industry, and as it is correspondingly slow in recovering, its effect will be equally pronounced in 1894."

The mica mining industry of the United States has been in an unsatisfactory condition for a number of years. In 1884 the production amounted to 147,410 lbs. valued at $368,525. In the following year it fell off to 92,000 lbs, valued at $161,000 and in 1893 the product was only 40,000 lbs. value $70,000. In 1887 the production increased somewhat, but again declined, and from then until 1891 the value of the product did not exceed 75,000 lbs., valued at $100,000. In 1893 the product is estimated by E. W. Parker (U. S. Geol. Survey) to have been 51,111 lbs of cut mica worth $80,629, and 156 tons short scrap or waste mica worth $8,300 making the total value of the output $88,929. During the year ended 31st December last, mica to the value of $147, 927 was imported.

Asbestos as an industry in the United States practically does not exist, the total product for 1893 only amounting to 50 short tons valued at $2,500 at the mines This output was confined to the State of California. In the same period Canada produced 6,473 tons of a value of $313,806. The exports from Canada to the United States amounted in 1891 to 7,022 tons, valued at $513,909 and in 1892 to 7,316 tons valued at $514,412. The value of the asbestos imports by the United States during the year ended 31st December last was of crude $175, 602 and manufactured $9.403 or a total import of $185,005.

In a paper on the origin of gold nuggets, read before the Royal Society of New South Wales, Mr. Liversidge gives a summary of the various theories which have been put forth to account for the existence of alluvial gold other than "the old and accepted one," that is had been set free by processes of disintegration. He also gives details of a large number of experiments made with a view to determine whether a nucleus of gold immersed in a gold solution and in the presence of such substances as would be likely to occur in nature will increase in weight, and he concludes that gold is deposited when the nucleus is *in contact* not only with metalliferous sulphides and arsenides which form strong galvanic couples, but also with such substances as iron oxides, charcoal, graphite, sandstone, granite, quartz, clay and marble, which form but weak galvanic couples with the gold nucleus. He questions whether the common assertion as to the greater fineness of nugget as compared with course vein gold has any foundation in fact. With fine alluvial gold there is such a difference, but this he thinks results from the removal of silver and other impurities by solution owing to the larger relative surfaces exposed. Discussing the question of solutions of gold in natural waters—although absolute chemical proof is still wanting -because it is found in recently formed pyrites, &c., where it must have come from solution. Furthermore, the author urges that large nuggets could be artificially produced by following the methods used in his experiments, and believes that gold is probably being so deposited at the present day. However he did not believe that the large nuggets have thus been formed *in situ*, although gold grains and dust may have been appreciable thus enlarged.

A recent letter from the Rainy Lake gold district, Ont., says: "The whole place is full of prospectors and claim jumpers, and one has to watch every move he makes. Prospecting is being done on a wholesale plan. There are six parties out at present who are playing the hog in every way. To give you an idea of how they work, I will describe one party, a man from U. S. A. He has two surveyors, fifteen prospectors and three or four Indians. This party has already surveyed over 50,000 acres. Although he has not paid for this, yet he holds the ground for one year, and as soon as any other party applies for any location within these 50,000 acres, buys it up and in this way really gets other men to prospect his land for him. There are five more like him—besides there are dozens of other small parties." This looks like a matter for the jurisdiction of the Director of Mines. The wholesale acquisition of lands by speculators is contrary to the letter and spirit of the Mines Act.

A mining exhibition is at present being held at Freiburg, Germany. A few days ago an interesting competitive trial took place between two types of rock drills, *i.e.*, the "Heise" and the "Thomas." The trial consisted in boring a block of sandstone 56 c.m. thick. Including the fixing of the bore frame and the changing of the drill, the "Thomas" machine is said to have occupied five minutes, while the "Heise" machine performed the work in less than four minutes,