since the methods of the two are so different. True, so they are. It does not seem to occur to him, however, that the high percentage of expense is a serious factor in the calculations by which the profits are made that attract and enchant the building and loan member. In these profits and in the marvels they can accomplish, Mr. O'Brien is, we observe, a profound believer. He explains to us, with courtesy and much intelligence, the eleven different sources of the large profits produced by the financial mechanism of his company. We call the attention of intending investors to them: 1st, the simple 6 per cent. interest on loans; 2nd, premiums on loans; 3rd and 4th, interest compounded monthly and premium compounded monthly; then there is a re-loaning of the principal as it comes in; 6th and 7th are fines and transfer fees; 8th, use of advance payments; 9th, forfeiture of profits by members withdrawing; 10th, lapses; and 11th, savings out of expense fund. The first five of these items are paid by borrowers, be it remarked, and the remainder nearly all by those who do not borrow, but simply pay in or profess to pay in.

If a man agrees to all the regulations he will assuredly be for 7½ years in a financial straight-jacket, of the most virtuous and economical kind, but still a straight-jacket. And if it were possible to put all male adult mankind into such pecuniary fetters, *and k ep them there*, miracles of monetary expansion and accretion might almost be wrought. But the notion is visionary. And this brings us to say that we object most strongly to the last statement on the last page of Mr. O'Brien's pamphlet, "No money ever lies idle." With all due respect to Mr. O'Brien and his respectable board of directors, it simply cannot be true of his company, or of any company, as any money-lending person or institution very well knows; and the literature of any company had much better not be soiled with any such glittering fictions.

SOUTH AFRICAN GOLD MINES.

Though a long time may be required to bring up the annual production of the world's gold to the maximum figure obtained when the California and Australian mines were at their best, improved processes are making it possible to treat successfully and at a profit, pyritic ores, which were previously the despair of the mining engineer and the chemist, and to extract good results from low grade ores which do not yield more than half an ounce to the ton. Some of the most profitable mines in South Africa scarcely average an ounce of gold per ton. The cyanide treatment of pyritic ores was, four years ago, an experiment, the success of which was in doubt. Now it has assured the successful treatment of a class of ores which previously had to be put aside as of no economic value. At first, and almost to the present date, the cyanide process lent itself exclusively to wet crushing; but recently experiments have been made in dry crushing with what is known as the Suckling stamp, using air blast. The largest results are still obtained by the quicksilver collection; but this is due to the nature of the rock. The gold so extracted is more valuable, and costs less to refine than that obtained by means of cyanide plant; but the latter is an addition to the total of gold that would have been won if this invention had not come into use. In New Zealand the patents of the Cyanide Company are under impeachment by the government. If this attempt should prove successful, the war on the patentees will probably go farther, an attempt having recently been made to induce the governments of Australia to join New Zealand in the assault. Success or failure is convertible into royalty or no royalty on the cyanide process. There is also the Siemens-Halske process, under which, owing probably as much to the nature of the ore as the merits or demerits of the method, some of the lowest results have been obtained. In one case, the product was only 3.9 pennyweights per ton.

As a means of preventing frauds in connection with the productiveness of the mines, the South African gold mining companies are obliged by law to make monthly returns of their operations in great detail, giving the number of days of mill work, the number of stamps used, the tonnage crushed, the yield per ton and in gross, the cost of working per ton and the total cost, the profit on the whole operation. The Government of the Transvaal has these returns submitted to the scrutiny of inspectors, and if any discrepancy can be discovered in the figures, the instructions of these functionaries are peremptory to proceed at once to enter prosecutions for the errors, though they may be occasioned by the carelessness of some routine clerk.

Nothing strikes an enquirer into the mysteries of South African gold mining, at this distance from the scene of operations, so much as the profits made on low grade ores. One company, on its milling operations in the year ending with June, made an average profit of nearly $3 per ton (£0 11.48). On the cyanide operations, the profit was £0 82.79. If this can be done in South Africa, why not elsewhere, in Canada for example? It is natural to ask this question; but we must beware how we give an affirmative answer without being able to arrive at the probable relative cost of the working expenses. Twenty years ago, Froude said of the people of South Africa that the whites would not work, because they expected the blacks to work for them; and the blacks would not work, because they preferred to be idle. But it is certain that a great deal of work is now done in the gold mines by white, and black, and yellow men. Many of them, we are told, work for wages so low that no men in Canada would be willing to take for their labor anything approaching to what is accepted there. Until we have reliable figures of the cost of mining labor in both countries an exact comparison cannot be made. There is some difficulty in getting labor for the mines of South Africa from a distance, especially when the frontier of a State has to be crossed; but if the full resources of native labor could be drawn upon, it would be possible to work at a profit a grade of ores which could not be worked in Canada. The conditions of mining there, so far as labor is concerned, might be made to bear some resemblance to the operations carried on in New Spain, when native labor was utilized in the mines, though slavery and cruelty and waste of life would be absent. But, after all, it remains true that only 25 out of 131 of these South African gold mines are paying dividends. Unless the majority of the others have not passed the development stage, the outlook is not encouraging.

Without making a special study of South African gold mining, it is difficult to see how any one there can safely venture to operate in the stocks. That some of them yield surprising profits is matter of official record. Dividends are paid up to 85 per cent., and the descending scale marks 25, 20, 15, and down to zero. One mine that was thought to be among the most promising a few years ago pays no dividend now, and has neither capital nor capital account; another, which was about that time thought to be scarcely worth working, is now paying 35 per cent., and may, the prophets tell us, with the increased stamping power now being provided, even double that high figure. There are even in the mining literature of the country few signs of feverish attempts to impose on the public stocks of doubtful value. On the contrary, one of the mining journals lays down the salutary rule that a speculative stock is a good thing to let alone.