

Loans on railway stocks and other securities for short periods	1,208,455	4	4
Advances on cash credit and current account	3,547,761	4	2
Acceptances, per contra....	558,072	16	1
Bank buildings at Head office, London office and branches	156,500	0	0
Heritable property yielding rent.....	93,500	0	0
	£16,330,939	11	5

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING 1ST NOVEMBER, 1888.

To charges of management at head office, London office, and 97 branches	£124,057	9	8
" Dividend at the rate of 13 per cent. £130,000	0	0	
" Extra dividend, or bonus, of 2 per cent..	20,000	0	0
	150,000	0	0
" Added to reserve fund	10,000	0	0
" Balance carried forward to next year	22,269	5	5
	£306,326	15	1

By balance brought forward from last year	£26,238	13	1
" Gross profit, after making full provision for all bad and doubtful debts; deducting interest due but not paid, rebate on bills current, income-tax, licence, and stamp duty; and applying a sum of £5,205 17s. 5d. in reduction of cost of heritable property and of alterations	280,088	2	0
	£306,326	15	1

T. H. SMITH, Manager.

F. N. MENZIES, Chairman,
JAMES TAYLOR,
WM. RENNY WATSON,
PATRICK BLAIR,
ROBERT STEWART,

Directors.

We, the auditors appointed by the shareholders of the National Bank of Scotland Limited, beg to report—in terms of the Companies' Act, 1879—that in our opinion the above is a full and fair balance sheet, properly drawn up, so as to exhibit a true and correct view of the state of the bank's affairs as at the 1st November, 1888, as appearing from the books. We also report, that we checked the gold and silver coin and notes of other banks then on hand at the Head Office in Edinburgh, and at the London and Glasgow offices; as also the certificates and vouchers of the balances with London bankers, Government securities, and other investments of the bank, and found the same in order.

JAS. ALEX. MOLLESON, C.A.

WILLIAM MACKINNON, C.A.

Edinburgh, 4th December, 1888.

NEW GOLD-SAVING APPARATUS.

An improved method of treating pyrites and other gold-bearing ores, and amalgamating the ore in a dry state of volatilized mercury, has been invented by Messrs. David Hutton and J. R. Yeates. The South Australian *Advertiser* says that Mr. Hutton reasons that however firm the gold may be, it exists (except in rare instances) in the matrix as free gold, and that hence to separate it it is absolutely necessary to bring the particles of quartz or iron surrounding each minute point of gold to the same degree of fineness; in fact, to the grade of fine flour. To do this to raw stone by mechanical force alone involves a tremendous amount of power and time. Hence he brings the stone into a condition to be treated before it is operated upon, arguing that the stone itself is the proper thing to work, not the tailings. By his process he succeeds in softening the hardest stone, and also kills the pyrites and base metals at the same time. He effects this by placing the stone in specially prepared kilns of about the capacity of 25 tons each. When the requisite degree of heat is attained he injects underneath the bottom of the heated mass, by

a system of reticulated pipes, hot steam, which passing up through the body of heated stone, the latter becomes decomposed, the steam associating in disintegration and driving off the sulphurous matters. To some ores he adds a proportion of chloride of sodium, which helps in a great degree to oxidise the iron particles surrounding and covering the pellicles of gold. After a sufficient quantity of steam has been injected, the mass is then covered down air-tight to "carbonize" as much as possible the whole contents of the kiln. When cooled down it is taken out and exposed to the atmosphere. Thus by the aid of fire, water, and air no small amount of mechanical force is dispensed with, and the stone is so friable that it can be passed through crushing rollers of special design at a great rate of speed and reduced to an impalpable powder. When it is in a dry state it is passed on to the amalgamating process of evaporized mercury, and every speck of gold is said to be saved. A portion of a parcel of ten tons has been treated by Mr. Hutton, at the Mount Torrens mine, and our contemporary states that the difference between the raw stone and that treated seems to warrant all that Mr. Hutton claims. In addition to this Mr. Yeates has invented a process which he claims is not confined to any particular class of ore, but will treat every description of stone containing the precious metal, however fine the gold may be. Mr. Yeates contends that if the mercury can be taken from gold in a state of vapor, that by reversing the process of ordinary retorting the mercury can be made to reamalgamate with the gold, and it is on this principle that his invention is based. By the ordinary battery tables and amalgamating pans in present use fine particles of gold are often floated over the mercury on pieces of the matrix, and all such are lost. The inventor states that it has been proved by assays of stone taken from many of the South Australian mines that hardly one-third of the gold is saved when treated in bulk by existing processes, but that by his invention he has completely altered this state of things, for the powdered ore is blown into a chamber containing vapors of mercury, and every particle is immediately covered with a film which is condensed by cold blast into metallic form. The amalgam so formed is precipitated into a pan containing clean, cold mercury, thereby saving absolutely all the gold. As the mercury is in constant motion and always receiving a certain amount of newly condensed mercurial vapor it never sickens, and always has a good surface for receiving the finest particles of gold. Another useful and very important feature of this invention is that it can be used either with or without water, which will enable mines to be worked in districts where an abundant supply of water is not obtainable. A report by Prof. Tate says: "The process is based on sound principles, and is as simple as it is ingenious, and the arrangement of the various contrivances do not appear to permit of any loss of gold."

OPIUM SMUGGLING.

There has long been great depression existing in the opium trade. Druggists have considered it due to the underselling on the part of dealers who had the advantage of using smuggled articles. Reports just come from Port Huron and St. Paul confirm the charges that opium smuggling is going on very extensively.

The Secret Service officers at Port Huron, Mich., learned that a large quantity of opium which was stored at Sarnia, Ont., for several months had disappeared. It was traced to Sand Beach and then shipped in a sailboat. A seizure was made on Friday night, valued at \$25,000. On Saturday the Secret Service officers seized \$20,000 worth of opium at Sand Beach, Mich., in a dense woods. Agent Day, with three detectives, rode twenty miles through the woods and discovered Henry Durant, acquitted last year on a charge of smuggling, mounted on a horse. Shots were exchanged and Durant was wounded. He was traced, however, and his hiding place discovered. There were found 125 cases of opium, which had just been removed. The men engaged in the removal had fled and no arrests were made. The opium was taken to Sand Beach.

A St. Paul despatch states that the United States Secret Service officers there are on the track of a gigantic opium smuggling conspiracy.

They have learned that an organized and well-equipped band of smugglers has for years been operating at the north-western corner. One of the gang arrested recently at Denver made a full confession. Acting on the information given by him, the Deputy Collector at St. Vincent, Minn., went west to a point on the Dakota line on Wednesday of last week, and intercepted a wagon load of 800 pounds of opium in the crude form. The opium in the wagon was concealed under a layer of buffalo hides. The whole outfit was seized and the driver of the wagon arrested.

STEAM FIRE ENGINES.

In support of the claim made by Mr. Ronald, of Brussels, Ont., in a recent letter, that the steam fire engines made by him are ahead of the American-made ones, some undoubtedly strong testimony is furnished in the correspondence copied below. The Brussels Steam Fire Engine Works have turned out excellent work in the shape of powerful fire-fighting machines, and Canadians should not be slow to reward native skill and pluck:

WINNIPEG, MAN., Dec. 8, 1888.

JOHN D. RONALD, Esq., Brussels, Ont.,

Dear Sir,—In answer to your request to give you our opinion as to the merits of your Fire Engines, would say that we purchased the first one in the spring of 1882 and the last one this spring. Both have been thoroughly tested in all kinds of most severe fire duty work, and, on all occasions, have given us unbounded satisfaction.

Before ordering the second one, we had tested and used three Silsby (American) engines and found yours to be far more durable, imparted far more power, threw more water, and much more effectual than the others, besides raising steam quicker, fully as easy to haul, always got to work quicker, and could always depend on it doing much more effective fire fighting.

So favorably were we impressed with the very powerful work of your steamers that we felt perfectly safe in placing our order in your hands for a new one this spring, and since receiving it we find our confidence was not misplaced, as it is giving us every satisfaction; as, indeed, is the one purchased from you six years ago, since which time it has been in constant service, during all that time doing double duty over the American engines.

I am, yours, on behalf of Committee,

W. GRUNDY,

Chairman of Fire, Water, & Light Committee.

The following is a quotation from a letter written from Vancouver, B. C., in November last by Mr. Thos. McGuigan, City Clerk:

"Your two Fire Steamers here continue to give excellent satisfaction. At our last fire they both worked admirably."

Commercial.

MONTREAL MARKETS.

MONTREAL, 26th Dec., 1888.

ASHES.—The market shows little animation; prices of first pots continue at \$4.00 to 4.05, seconds, \$3.55 to 3.60; pearls are very dull, there being too many here for the demand, which is limited at best, and we quote about \$5.75. Receipts of pots will be somewhat short of last year's, there being 3,519 barrels in, up to end of last week; of pearls, however, the receipts have been much larger than usual, being to date 661 barrels. Shipments have been very light since close of navigation, owing to high freights, only three lots aggregating 135 barrels having gone forward.

BOOTS AND SHOES AND LEATHER.—The boot and shoe factories will wear a very quiet aspect from the present time until after the 6th prox.—Epiphany or old Xmas—up to which date the French Canadian operatives always prolong their festivities, but there will nevertheless be a certain amount of cutting done. Leather has not been in demand to any lively degree, and stocks of black leather show some little accumulation, but prices generally remain steady. The English market was quiet at last accounts, but there was no disposition to sell except at quotations; stocks