

1876 the consumers bought 2,500,000 tons, and probably 5,000,000, tons were cut. Beer brewers are the best customers of the ice companies, several using 30,000 tons of ice annually.

— Montreal can no longer lay claim to the possession of the longest bridge in the world, that of the North British Railway over the Tay having been in effect completed. Work was begun on it in June, 1871, but various delays, change of plans, &c., have deferred its completion till now. The bridge will cost about \$2,250,000, and is 10,142 feet long, but some small spans and arches bring up the actual length to more than two miles. There are eighty-five spans, at the summit level the roadway is 88 feet above high-water mark. The thirteen central spans are 245 feet each. The Victoria Bridge is 6,294 feet long, not including the approaches, which add 2,600 feet to this.

— The sworn returns of the business done in New York City by the fire-insurance companies exhibits a startling decrease of earnings. The amount of premiums received on New York City business by the New York and other companies during the first six months of 1874, 1875, 1876, and 1877 were:

	1874.	1875.	1876.	1877.
N. Y. Cos.	\$2,550,492	2,563,738	2,185,561	1,815,329
All other Cos.	1,302,013	1,198,176	1,085,459	979,842

Totals.....\$4,158,476 3,761,914 3,271,020 2,825,171

The condition of the insurance business has been much like that of the railroads. The number of companies has not decreased; the competition in rates has been exhaustive; at the same time the amount of business to be done has decreased greatly.

— A gigantic land swindle has been discovered at Kansas City, Mo., and about sixty persons arrested by the United States Government for being implicated therein. The ring-leaders had made duplicate copies of notarial and other seals, and had obtained the signatures of many officials. They also had printed blank forms and perfect copies of deeds necessary for their operations. All titles and patents representing either State or government lands used by them were forged. An immense amount of land has been conveyed by them under many aliases, and to many different parties. About a year ago the attention of the authorities was called to the matter, and a special agent was sent from Washington, who obtained a clue, which he followed up till he had evidence against about sixty persons, who were arrested simultaneously. No less than thirteen court houses have been burned the past year to destroy evidence that could be brought against the swindlers. We presume this is the swindle which was extensively advertised in our Canadian papers about a year ago.

— It is a pity that so many of the valuable silver mines on Lake Superior have been allowed to fall into the hands of Americans, thereby giving them the handsome dividends which might have gone into the pockets of our people. The former, however, have always shown much more enterprise in developing these mines, and are therefore entitled to the rich reward which Canadians are allowing to slip through their fingers. As an instance of the valuable returns these mines yield we would refer to the following statement of the

Ontario Silver Mining Company, which we find in a New York paper:—The eleventh regular monthly dividend of the Ontario Silver Mining Company, of \$50,000 in gold, will be paid on the 15th inst, at the office of Wells, Fargo & Co. The average monthly production of the Ontario is between \$150,000 and \$175,000. The product for September was \$173,238 11. The total production of the Ontario to the 1st September was \$2,072,431 86. It has paid dividends in the last seven months of \$500,000, or, inclusive of the one earned and advertised, of \$550,000, which leaves a balance in the treasury of \$250,000 gold net surplus.

— A recent computation says that in 1840 the yearly average of railway construction in the United States was about 500 miles. In 1850 this average had increased to 1,500. In 1860 it was nearly 10,000, and in 1871 it was stated that enterprises requiring an expenditure of \$800,000,000, and involving the construction of 20,000 miles of railway, were in actual process of accomplishment. In 1872 the aggregate capital of the railways of the United States, which were estimated to embrace one half of the railways of the civilized world, was stated to amount to the sum of \$3,153,423,057, their gross revenue being \$473,241,055. Road after road has defaulted, so that now \$900,000,000 of bonds are held, without any return to the holders of them, in addition to \$1,579,000,000 of stock, being two-thirds of the whole, which is in a similarly unprofitable condition. Under such circumstances railway construction has come to a standstill. The rolling mills roll no more iron rails, and the thousands of laborers who were at one time employed in grading, tunnelling, tie-cutting, track-laying, fencing, &c., are now compelled to seek some other kind of employment, and do not meet with very much success.

— Messrs. Dun, Wiman & Co. have issued their quarterly circular showing the number of failures for the first nine months of 1877. The figures for the Dominion of Canada are as follows,—

	Number.	Liabilities.
First quarter.....	572	\$7,576,511
Second "	650	7,575,326
Third "	424	5,753,139
Total nine months.....	1646	\$20,904,976
Total in 1876.....	1256	17,786,150

It will be observed that the failures for the third quarter of the year are less, both in number and amount, than for either of the two preceding quarters, and also that they are much less than for the corresponding quarter of last year. This is the first time for many months that the figures relating to insolvency are of an encouraging nature, and this, taken in connection with the good crop which is now being marketed at good prices, lead to the hope that the worst effects of the depression have been felt, and that the poorer class of business men having been pretty well weeded out, trade affairs will speedily assume a more healthy condition.

Compromises.—Now that the lines of credit are being loosened, and parties are becoming too anxious to sell goods, not a few deliberate attempts are being made to make money by failing. Attempts at settlement at thirty and

fifty, and even seventy-five cents are becoming alarmingly prevalent. While there are, no doubt, many men to whom a compromise is a judicious and reasonable concession, it is notorious that the system, if at all encouraged, will be most dangerous to the trade of the country. A failure, nine times out of ten, implies something wrong, either in capacity, capital, character, or locality. Compromises do not supply any of these defects. It is but a premium to dishonesty to write off a rogue's indebtedness for twenty-five cents on the dollar. It will not supply brains to an honest fool to settle with him at fifty cents, nor will it help the trade of a locality to permit a failed man to rush his stock off at one-half cost, to the detriment of every honest man in the same place who is trying to pay one hundred cents in the dollar. It encourages a low grade of morality. It helps along the weak and inefficient, discourages the capable and reliable trader, and, in the end, will do more to sap the foundations of the wholesale dealer than any departure from legitimate business principles.—*Canadian Mercantile Annual.*

LIFE INSURANCE QUESTION. (Contd.)

The surplus must be distributed among the partners, and if these are stockholders, it is done with obvious and perfect equity by giving each one an equal percentage on the stock he holds. But if they are policy-holders, the problem becomes exceedingly complex, and presents difficulties which are formidable to the actuary. It is not completely solved; but, fortunately, the general principle of the solution is well settled, and any faithful and uniform application of it which is agreed upon by the parties is fully defensible, and results in determining the rights of each, if not with ideal precision, at least with an exactness and delicacy unapproached in any other complicated business transaction. The principle is simply, that the surplus belongs to the partners in the ratio of their several contributions to it. This is a rule of universal validity, and applies equally whatever method be adopted for estimating the proper reserve. The price of insurance has been fixed upon assumptions, each of which is made extreme, so as to be safe beyond question; and upon each of them an indefinite margin of profit is expected. By paying this price the partner has bought, besides his insurance, the right to a return of the margin or excess by which it shall in the end prove to have been greater than its actual cost. The first definite apprehension of this principle and its consistent application, under the current theory of reserves fifteen years ago, proved a memorable era in the science of Life Insurance. But to understand the change it produced, it is necessary carefully to distinguish the principle itself from the theory to which it was then applied, and with which it became associated. Its discoverers, whose conceptions of the business were formed under the theory of net valuations, with the doctrine of individual reserves, embodied it in a detailed plan of distribution, wrought out with rare ingenuity and completeness. "The contribution plan," therefore, came before the world, with the weight and prestige which their admirable discovery could not fail to give to any adequate expression of it, but entangled and imbedded in a set of notions which not only are unessential to the principle, but are, as we have seen, erroneous of themselves, and pernicious in their influence. The general assent justly given to the true law of distribution, when once formulated naturally brought with it assent, almost as general, to the mistaken conceptions with which it was thus connected. It remains for competent actuaries hereafter to free the law from these parasitic