

dispose of their shares. The company will shortly open an office in Toronto.

C. A.; Ottawa.—We give quotations of such stocks regularly, but have neither time nor space to chronicle all the hopes and fears of what is called "the street," or to indulge in the guesses which some journals give forth to encourage speculators. We neither speculate on margin ourselves nor knowingly assist others to do so.

W. R.: Fort Erie.—The address of the firm in question is Chatham, Ont. The St. Thomas project was not, we believe, carried, out, the town of Chatham having made the concessions asked for.

MANUFACTURER; St Hyacinthe.—Nearly four years ago. See MONETARY TIMES of February —th. 1879.

CORN EXCHANGE ASSOCIATION.—The association met on Tuesday last, pursuant to adjournment, to consider the abolition of tolls on the St. Lawrence and Welland Canals. The president was of opinion that the Montreal Harbour Trust should abolish the tolls and charges imposed on vessels entering that port, as even this concession would go a long way toward helping the vessels in their competition with the railroads. They had, he thought, overlooked the future trade of the great North-West. At the present time the American Government allowed Canadian vessels to pass through the Sault Canal free of charges except the tonnage dues which have to be paid when entering an American port. Mr. Gordon claimed that the memorial from the Montreal Board to be presented to the Governor-General praying for the abolition of the canal tolls, should not ask for the total abolition of canal tolls except for Canadian vessels, and it should not apply to vessels going from one Canadian port to another. He moved the following resolution, which was seconded by Mr. L. A. Tilley:—

"We agree with the Montreal Board of Trade, with the exception that the canals shall be free to Americans vessels except when destined for Canadian ports."

Mr. Spratt's motion urging delay was not seconded. Mr. Baird, seconded by Mr. Weatherston, then moved a resolution in connection with and in addition to Mr. Gordon's resolution to the following effect:—

"That this Association cordially endorses the movement of the Montreal Board of Trade, and hereby moved that Messrs. Hagarty, Spratt, Tilley, and Matthews be added to the Board of Management to draw up a memorial to convey to His Excellency the views embodied in the resolution of Messrs. Gordon and Tilley."

Mr. Gordon's resolution being coupled with the last one, both were carried unanimously, after which the meeting adjourned.

—From an Ottawa despatch we gather that during the month of November last, immigrants to the number of 8,861 arrived in Canada. This makes 162,267 arrivals during the eleven months of the present year, ninety thousand of whom remained in the country. Of the November arrivals 1,377 were reported at Quebec; 513 at Halifax; 3,086 at Suspension Bridge; at Emerson (from United States), 1,154; Montreal 39; St. John, N. B., 10; Custom's returns, 2,607; agencies on the United States border, 75. Of the total arrivals this year it is added, about ninety thousand remained in Canada and seventy thousand were destined for various points in the United States.

—The Hamilton Provident Loan Society announces a dividend of four per cent. for the half-year, the Building and Loan Association one of three, the London & Ontario Investment Co. one of three and a-half; the Farmers & Traders one of four.

—Judgment in the matter of the set-off claims in Prince Edward Island Bank was given by Mr. Justice Peters of the Supreme Court of that Island recently. This decision is to the effect that a shareholder can, when a call is made upon him for his double liability under the bank's charter, set off against it any amount which the bank at the time of its failure owed to him. This would make a material difference in the assets of the bank; the result being that shareholders will obtain payment of their debts or deposits in full, in preference to other creditors of the bank, who will only get whatever the dividend of the assets can pay. A motion was made for leave to appeal, which the Judge granted.

—Religious banking has been abolished it appears, in the diocese of Cincinnati, lately presided over by Archbishop Purcell. Priests are forbidden to receive money for deposit or for investment from private parties. The lesson of the disaster of 1879 in that diocese has evidently been learned.

—The principal items of export from Guelph for the month of November were eggs \$71,304; barley \$22,843; stock \$11,117; organs \$4,550; flax \$4,384; peas \$2,947; horses \$2,345; other items make a total of \$126,311.

IMPROVEMENT OF OUR BUTTER INDUSTRY.

(Communicated.)

III.—LOOKING TO THE DAIRY FOR IMPROVEMENT.

In the preceding paper it was shown that the creamery alone would not meet the necessities of the case. That being true we must look for some improvement in a change in the system of home dairying.

The full adoption of scientific methods in the dairy, will involve, as it does in the creamery, the use of suitable appliances. Said Prof. Bell on this point: "No doubt the rule-of-thumb method of working by fixed and arbitrary rules has attained good results in the hands of some gifted and pains-taking individuals; but the great mass of persons will fail, from some unforeseen circumstance, for which they cannot account, while those who work on scientific principles will be less liable to annoying accidents, and when such occur can trace their cause and avoid them in future operations. * * * The purest chemicals will fail to produce their effect unless accompanied by an appropriate apparatus. It is then mistaken economy to retain worn-out implements and utensils, for the more complete the plant the greater excellence attained; the readier the sale, and the higher the price realized for the product." It will be seen here that even the marketing of the product is affected by the use of the implements in manufacture. Butter-making, in fact, in each of its various processes, is simple and easy, and satisfactory in result, or complicated and difficult and unsatisfactory in result, according as scientific method and suitable appliance take the place of no method and unsuitable appliance. For instance, cleanliness, which is of first importance, is itself, in some measure, absolutely dependent upon place and utensil. Temperature of the material has much to do with the process, and while temperature is determined by mechanical aid readily and with exactness, without mechanical aid it requires, to determine it, additional labor and rarer skill than is common, or possibly a natural faculty rarely found. The variation of the temperature of the air can be satisfactorily overcome only by mechanical means. The utensil that holds the cream while it is awaiting further process will bear upon

quantity. The grain of the product, also the purity of it, or freedom from foreign matter or taint, are both largely dependent upon utensil. The salting, the packing and the keeping quality, again, are largely dependent upon the utensil used for working, and upon the tub for packing.

As an illustration of the importance of method and utensil combined, let us take the process of separating the butter, when first churned, from the butter-milk and any foreign matter that it contains. The best result is attained by washing the butter in the churn, when the butter is in a granulated state. What may be accomplished by the adoption of this process will be seen by reference to one or two of many authorities. Says Prof. Arnold:

"The granules of butter which are thus formed are very hard and compact, and entirely free in their interior. The advantage of gathering in this granulated form is, that the butter is perfectly freed from butter-milk by rinsing with cold water without working whatever, thus avoiding entirely the injury usually done to butter by that process. * * * This method of gathering in a granulated form preserves the grain of the butter in the most perfect condition and gives to it the highest flavor and the best keeping quality. It has been found that when butter is thus gathered in granules it may, as soon as rinsed, be at once put into vessels filled with strong brine and closely covered or tightly headed, and that it will in this condition keep unchanged for long periods. * * * This mode gives the finest gilt-edged butter." (American Dairying p. 232 3.)

Prof. Sheldon quotes Mr. H. M. Jenkins, on continental dairying, as saying: "A careful enquiry into the manner in which butter is made in the several districts of Normandy, has convinced me that other things being equal, the quality of the butter depends upon the *the earlier and later period at which the washing in the churn is commenced.*" (Dairy Farming, p. 511.)

While this process appears to be an essential feature of scientific butter-making, and adopted by the advanced butter-makers in different countries, the old-time butter-maker does not seem to know anything about it. As employed by some of the makers of gilt-edged butter, as described by Prof. Arnold and other writers, the process is most difficult for the ordinary dairyman to understand, and its general adoption is long delayed. As it is carried out in connection with the best improved implements, the process is quite simple, and the general adoption of it will simply follow the introduction of the improvement itself.

The sewing-machine is an illustration of what help may lie in mechanical aid. The art of sewing was difficult to learn, and the neat, strong stitch came only after great practice, and sometimes never. But with the machine little time is required to become able to make such stitches as the hand itself could not have acquired skill enough to make.

Not only then do we see that other conditions are dependent upon mechanical aid, but we find that method itself may be, and usually is, determined by the utensil employed. If scientific method and suitable appliances are so closely associated in a condition of improvement, we have, in order to know what measure of reform is necessary, to learn if there be any imperfection and lack in method and utensils in our dairies as they are.

Hardly any part of agricultural or even household work is so poorly supplied with modern improved utensils as the dairy. The all-important thermometer, (without which both cheese and butter-making would suffer very seriously,) which is always a part of