clays can be obtained in the neighbourhood, and as there is a large demand in the colony for ware such as they can turn out, the new Pottery Company has every prospect of a prosperous future. Other local industries which are doing a good business in Milton include the fellmongery and wool scouring works, carried on by Mr J. B. Scanlon, who employs a large staff of hands throughout the year; and the Britannia Brick and Pipe Works, owned by Mr G. Jones, whose wares have gained considerable fame over a wide district. The financial interests of the district are watched over by the National Bank and the Bank of New Zealand, both of which have fine buildings for the transaction of their business. The spiritual welfare of the community is well looked after, the Presbyterian, Anglican, Wesleyan and Roman Catholic communions all holding regular services, while the Salvation Army are also pretty strong in the town.

To return, however, to the Bruce Woollen Company, a few facts regarding their future operations may not prove out of place here. The contract for the building is expected to be finished in about three months. Before that period is reached nearly the whole of the machinery will be in Milton, and the work of fitting it up will be at once proceeded with. This is expected to occupy about two months, and after that very little time will elapse before the manufactured product will be on the market. The factory will employ about 100 hands—men, boys, and girls—while about 1 000 bales of wool will be used every year after the work is fairly under way. It is proposed to go in for the manufacture of worsted serges for ladies' and gentlemen's wear, fingering yarns, hosiery, tweeds, flannels and blankets. It is worthy of remark that, although there are seven other woollen companies in New Zealand, only one of them is at present turning out worsted goods, of which the Bruce Woollen Manufacturing Company intend to make a speciality. As a very large quantity of this class of goods is imported annually, it will be recognised that there is a good field open for the products of the Company. Several orders have already been secured from wholesale houses, so that the Bruce worsteds will have an excellent opportunity of obtaining a hold on the New Zealand trade.

That the establishment of such an industry as a woollen factory will confer a great benefit on the Tokomairiro district does not admit of any two opinions. Though a fine agricultural centre, it has long been felt that what was wanted was some big industry, which would give employment to the young people of the place, and which would also supply the much felt want of a regular circulation of ready money—of which there is always a scarcity in a purely agricultural district. Both these troubles will be remedied by the Bruce Woollen Company. The residents of Tokomairiro are fully alive to the immense advantages which will accrue from the presence of such an industry in their midst. From the commencement the affair has been mainly a local venture, as will be seen when it is stated that of the 16,000 shares subscribed for, 12,000 were taken up in Milton and the surrounding district. This speaks volumes for the public spirit of the residents; and the indomitable pluck exhibited by the promoters of the company in bringing it to such a successful issue, in face of the strong opposition which was shown to the undertaking in some quarters, is certainly deserving of an abundant measure of success. The Company is now fairly started on what we hope will prove a successful career. It will lose nothing in the way of sound management. The directors are all shrewd men of business, who have won their positions by the successful manner in which they managed their private concerns, while the expert heads of departments all bear most exceptional records. New Zealand is fast becoming an important manufacturing country, and we feel sure that the Bruce Woollen Company has the good wishes of every true colonist who desires to see his adopted country flourish, and one day take its place, as it bids fair to do, among the manufacing countries of the world.

DU MAURIER'S DAUGHTER.

SYLVIA DU MAURIER—one of du Maurier's loveliest daughters—apprenticed herself to Mrs Nettleship, a famous London dressmaker, for a year, and went bravely through all the drudgery of dressmaking, from the beginning to the finish. She, like Mrs Nettleship, had the taste of an artist, but she lacked the practical technique of dressmaking.

Now, as she has married a brilliant, but struggling young barrister, she designs and makes all her own costumes, and is as well dressed as—and, what is of much more importance, differently dressed from—any woman in London.

It was said that after Mr du Maurier's sight failed him, Sylvia helped in many of his drawings, and it was her face that one saw constantly repeated for the duchess in 'Peter Ibbetson.' Mrs Nettleship says of her, that from the onset her taste was faultless, and that she was so apt it was no trouble to teach her anything.

FIND THE POLE!

THERE are some very serious and difficult problems confronting scientists and Arctic explorers in their determination of the exact position of the North Pole. Many of our eminent scientific men are of the opinion that, even if Arctic explorers should be successful in reaching this spot, so long sought and dearly paid for in the lives of courageous and illustrious men, they would not really know when this Mecca of refrigerated crusades had been reached.

The North Pole is one of two points on our little globe—the South Pole being the other—where there is no time, that is, no actual time as measured by the rotation of the earth every twenty-four hours, and, again, there is no space, in the sense of geographical relation of latitude and longtitude, for there it is all longtitudes at the same instant.

If a man were dropped upon the North Pole (it is unnecessary to explain the Jules Verne method of accomplishing this) would he be able to locate his precise geographical position?

Let us assume, for humane reasons, that he is a scientific gentleman, thoroughly familiar with the physical characteristics of the earth, with a knowledge of applied astronomy, and that he is fairly well equipped with instruments for geodetic and astronomical observations, and then let us watch what he will do to find out where he is.

If it were summer time he would find the sun constantly above the horizon, and, in the dazzling and blinding glare of continuous daylight in this region, deeply blanketed with snow and ice, he would never see a star and thus from necessity must depend solely for his calculations of geographic position upon the sun. From the fact that the earth's axis of rotation is not at right angles to its direction from the sun, but inclines 23½ degrees out of this position, and also that it circles around the sun in this fixed position, it will be seen that in summer the North Pole points toward the sun, and consequently it is always daylight, and that in winter this axial extremity is turned away from the sun, causing continuous night.

We have placed the scientist in this precarious position during the summer months largely for the sake of his health, and that he may thaw out in the slanting rays of the polar sunbeams, but, thrusting hygienic proprieties aside and assuming that he can withstand the rigours of the terrible winter night and yet make outdoor observations, the question may be asked, can he definitely state that he is on the pole?

It is said by those who know that he can, provided he has solid earth under his feet or an immovable mass of ice from which to make his observations, and sufficient time in which to verify them. In this long winter's night the twinkling eyes of heaven—the stars—shine out clear and brilliant, and almost directly above his head scintillates the baby polar star—the guardian angel of direction since the dawn of man. If this tiny point of light describe a true circle, very small though it be in angular measurement, directly over his instrument, then, poor fellow, he may rest happy in the thought that he overlooks the world and has his seat upon the northernmost point, geographically, of our planetary oblate spheroid.

He may from this vantage point seek out other stars nearer the horizon, and verify his position with the aid of his chronometer. The instant he moves away from the pole trouble begins, and all attempt to locate himself by any other stellar body than the polar star is practically futile, for all other positions depend upon longitude for their determination, and longitude is a very vexed affair in close proximity to the pole, where degrees are only a mile or so in length. His only hope lies in the fixity of the polar star and in the accuracy with which he reads its angular position in the heavens, and then he has but one the factor of latitude.

It is extremely doubtful whether even the best instrumentally equipped explorers could maintain that they were always cognisant of their longitudinal position, though it is hardly likely, unless their instruments were sorely defective, that the latitudes have not been correctly given. One of the chief sources of annoyance and trouble has been the delicately adjusted chronometers, presumably keeping synchronous time with the standardised timepieces of Greenwich and Washington, in temperate zones. Besides the constant care and attention and regular winding of these delicate devices there is an even more serious bugbear, the excessive frigidity of high latitudes; a chronometer may not be subjected to such extreme cold without a disastrous change in its rating, if not a complete stoppage of the works by congealed particles of oil, and consequently they are carried next the person to secure the desired warmth, and only examined where the surrounding temperature has been artificially raised.

It is also quite impracticable to successfully work the finest types of theodolites, for the mere approach of the warm human body covers the telescopic glasses with condensed vapour, which greatly hinders correct reading. In point of fact, all of the sensitive, delicate instruments of precision are detrimentally modified by the terrific cold of the frigid zone. Thus, when investigators in these regions have the greatest need of perfect mechanical apparatus, far more than in countries to the southward, to unravel geographic puzzles, they are the most handicapped.

Two other ways have been suggested, unique in themselves, for determining the location of the North Pole.

One is to set up rigidly a tripod from whose apex swings a heavy pendulum It is known that the direction of oscillation tends to persist, or that, once set moving in a definite vertical plane, it will constantly cut that plane and no other. This being true, and assuming that the apex of the tripod is directly over the axis of the earth, its legs will describe a complete circle every twenty-four hours, but the pendulum will swing on in the even tenor of its way in the same direction originally given; at no other place on the earth's surface, except at the South Pole, will this be true.

If the circle made by the tripod legs were to be divided into twenty-four equal intervals, assigning to each one some hour of the day, and the pendulum were just long enough to beat seconds, one would have the most magnificent clock in the world. The pendulum would be its own second, minute, and hour hand, and the grand old earth the driving mechanism for the rotating dial, and, by the way, if the miserable chronometer should run down, it could be accurately re-rated from this marvellous timepiece.

The second method is to carry a spring balance, and as the earth is some twenty-six miles shorter in its polar than in its equatorial radius, a given mass of matter will weigh more there or at the South Pole than on any other portion of the earth's surface. This is one of the curious laws of gravitation, that the greater altitude you attain theless a given mass weighs, and, inversely, the nearer sea level or below the earth's crust for a certain distance, the greater will be its apparent weight.

PROFITABLE BLUNDERS.

A CERTAIN doctor in London owes his first introduction to business to a very fortunate mistake. He was in a *café* in Paris, when one of the waiters coming to him, requested him to follow him, and conducted him to a group of young fellows who seemed to be settling some very important matter. He was hailed as 'the doctor,' and was requested to immediately attend the party to a spot outside the town to render his services at an affair of honour. It came off, one of the parties receiving the 'satisfaction of a gentleman' in the shape of a not very severe wound in the thigh. The young fellow was a man of rank, and, being taken with Dr. G., subsequently gave him letters of introduction to families in England, the outcome of which was that the doctor found himself with influential patrons It turned out that the waiter had mistaken him for a doctor living in the neighbourhood.

A traveller in the East says:—Some years ago being at an outpost in China, and wishing to put some money in the bank as a fixed deposit, I sent 3,000 ounces of silver to a bank in Shanghai, asking them to buy gold and send it home to England for me. They made a mistake and invested it in a silver deposit. I wrote back at once pointing out their mistake, and asked that the terms of my former letter should be carried out. Silver has a very variable value, and during the time the letter had been going backwards and forwards each ounce had risen fourpence in value. This proved a very lucky mistake for me, for it put 3,000 fourpences in my pocket.

A Norfolk gentleman tells the following story:—I had been assured that the shares in a certain South American silver mining company afforded an excellent investment, and one night I wrote from Norwich to the office of the company, enclosing a cheque for the purchase of one hundred shares at the then price of £3 a share. I heard nothing from them for two days. On the second day I read that the undertaking had failed. The very next day I received my letter back again through the Dead Letter Office. It had been misdirected—I had put Liverpool instead of London.

A retired mariner says:—In June, 1889, I signed articles as fireman to go a three months' voyage up the Mediterranean in the s.s. 'Rome.' The night before she sailed I was arrested in mistake, charged with committing a robbery at Aintree, and the magistrates remanded me for inquiries. A day later the man who had committed the robbery, and to whom I bore a strange likeness, was caught and I was at once set at liberty, the police acknowledging their mistake. In the meantime my ship had proceeded on her voyage. While homeward bound she foundered in a gale, all on board being lost

A broker tells the following story:—I was acting as commission agent for a big coffee broker in South America, and we anticipated that the paper dollar would depreciate considerably in value owing to an impending revolution. In order to buy at the current rate of exchange, now was the very moment to act. I therefore immediately called a big order, one of the largest on record. Our code signal was the letter G and some figures, which letter I printed on the form. This was mistaken for the letter C, and curiously enough, one of the figures, a 5, was mistaken for the figure 3. I had written the message in a great hurry, fearing the Government might at any moment stop all communication. The result was the message was very different from what I intended, and the order now read for a class of produce which subsequently became quite a scarcity in the market. We made a very good thing of it—indeed, it put a few thousand pounds in our pockets.

CLIMATE AND MOVEMENT.

'THE most important physical factor in determining lines of movement,' says a well-known man of science, 'has been climate. Speaking broadly, migration follows the parallels of latitude, or, more precisely, the lines of equal mean temperature, and not so much, I think, of mean annual heat as of mean winter heat. Although the inhabitants of cold climates often evince a desire to move into warmer ones, they seem never to transfer themselves directly to one differing greatly from that to which they are accustomed; while no people of the tropics has ever, so far as I know, settled in any part of the temperate zone.

'There is one instance of a North European race establishing itself on the southern shores of the Mediterranean—the Vandals in North Africa, and the Bulgarians came to the banks of the Danube from the still sterner winters of the middle Volga. But in the few cases of northward movement, as in that of the Lapps, the cause lies in the irresistible pressure of stronger neighbours; and probably a similar pressure drove the Fuegians into their inhospitable isles.

'The tendency to retain similar climatic conditions is illustrated by the colonisation of North America. The Spaniards and Portuguese took the tropical and sub-tropical regions, neglecting the cooler parts. The French and the English settled in the temperate zone, and it was not till this century that the country toward the Gulf of Mexico began to be occupied by incomers from the Carolinas and Northern Georgia. When the Scandinavian immigration began it flowed to the North-west, and has filled the States of Wisconsin, Minnesota and the Dakotas.'