he was so large a debtor. For many years this firm has been at the head of the corn and seed trade in this town, and their transactions were of the widest possible extent. Of course the deficiency of this firm, which was one of the leading causes of the bank's suspension, are likely to have a serious effect in diminishing assets. Harrison & Watson's assets, though we believe full allowance has been made for this loss in the estimate which is given above.

The bank of Messrs. Harrison, Watson & Co. was first opened in 1786, under the firm of Pease, Harrison & Co.; subsequently, on the accession of additional partners, the firm was altered to that of Pease, Harrison, Watson, Pease & Locke, and a bank at Malton, under the firm of Pease, Dunn & Pease, was carried on in connection therewith by some of the partners in the Hull establishment; but, in the course of years the Bank of Malton was wound up, and the late Mr. R. C. Pease, the senior partner in both firms, retired from business. Mr. Henry Pease, however, continued in the concern, under the firm of Harrison, Watson & Locke. The partnership of Mr Locke expired by effluxion of time some years ago, and was not renewed, and the firm then became Harrison, Watson & Co. The house ceased to issue its own bank notes about thirteen years ago.

Mr. Thomas Bentley Locke, formerly a partner in the firm, has just put an end to his life by his own hand. The melancholy event, which has added to the excitement recently occasioned in the town, has naturally given rise to the inference that the deceased gentleman was liable for the debts of Messrs. Harrison, Watson & Co., in which case the prospects of the creditors would be materially improved, as he was in wealthy circumstances. Mr Locke's connection with the house, however, terminated on the 10th of July, 1855, and his name was duly gazetted out of the partnership on the 14th of that month. The assumption now is that the unfortunate gentleman is involved as a large creditor of the bank or of the parties implicated in its failure. Mr. Locke was well known in Hull and highly respected.

The Anglo-Indian Staff Officers.

[From the London Herald (ON authority), Oct. 5.]

BENGAL.

Commander-in-Chief, Sir Colin Campbell.
Chief of the Staff, Major General Mansfield.
Major General, Sir Hugh Rose.
Major Generals, Wyndham, Havelock, Sir Robert Garrett and Outram.
Deputy Adjutant General, Packenham.
Deputy Quartermaster General, Wetherall.
Dupins commands the Royal Artillery.

MADRAS.

Commander-in-Chief, Sir Patrick Grant.
Major General, Craigie.

BOMBAY.

Lieutenant General, Somerset.
Major General, Sir Hugh Rose.

It is calculated that there is a general officer for every 5,000 men, which gives a total force of 25,000 men for the whole of India.

ARRIVAL OF THE EUROPA'S MAILS.

The European mails to the 10th inst., brought by the steamer Europa, reached this city about half past twelve o'clock last night. Mr. Parvem, express messenger of Adams & Co., promptly delivered the packages of the Associated Press, on the arrival of the midnight train, six hours in advance of the mail.

We have received the following despatch in relation to the steamship Borussia:—

GREENOCK, Scotland, Oct. 7, 1857.

The steamship Borussia, Wootman, from Hamburg for New York, has arrived here with her machinery disabled.

The Financial Crisis in Europe.

THE EFFECT OF THE AMERICAN REVULSION.

[From the London Times, Oct. 9.]

The Bank of England advanced their rate of discount yesterday from 6½ per cent, at which it had stood since the 16th of July, to 8 per cent.

The suddenness of the renewed drain of gold which has led to this step has taken the public by surprise, because they were not prepared for the extraordinary news by the two last American mails. Allowing due weight to that intelligence, there is nothing in the movement to create alarm, although there is a high probability it may soon have to be repeated. The trade of this country with the United States represents an annual total of £40,000,000, and it is impossible for any financial trouble to occur on one side without its being deeply felt on the other. During the last two years we have had many opportunities of observing the sensitiveness with which we respond to monetary perturbations in France, but our relations of commerce and capital with that country are altogether insignificant in comparison. A panic in New York, therefore, which sends the rate of discount to a point ranging between twenty and fifty per cent, and which is continued with intensity for five or six weeks, must necessarily subject us to severe temporary pressure; and if the inconvenience should be limited to a rise of a half or even one per cent in the value of money we shall have reason to congratulate ourselves and to accept the fact as another proof of the inherent soundness of our general position. For more than a month past not only had every payment due to us from America been as far as possible suspended, but special credits have been eagerly made use of, calls on railway stocks largely held here have been announced (in one case alone for an amount approaching a quarter of a million sterling) and draughts authorised for the purchase of securities by English capitalists, tempted by a fall in prices, from which they conceive there cannot fail to be an early reaction. It is scarcely too much to assume that in this way a million or a million and a half sterling has been already withheld, or absorbed from us, that would otherwise have been in our possession at this moment, and the prospect is that the process will go on for some time longer. It must also be considered that at the same period we have been despatching the most costly fleet of transports ever employed at one moment with thirty or forty thousand troops to India, the outlay upon which in the shape of stores, fuel, &c., cannot have fallen much short of half a million, for which we shall get nothing until the return of the vessels from Calcutta as the payments from the Indian government will not be made till a certain number of days after the arrival of the vessels at that port. The India house at home, moreover, in order to lighten as far as possible the liabilities of the territorial government, are abstaining from drawing the usual amount of revenue required from that side for the payment of dividends and other purposes, and have thus found it necessary to borrow a million from the bank. Upon the whole, therefore, it is possible that the combined operation of the American panic and the Indian insurrection may for the time have affected our resources to the extent of two or three millions. A decline of about a million in the bullion of the bank is usually followed by an advance of a half per cent in the rate of discount. It would consequently seem that these adverse influences, as they have borne upon us to three times that amount, might have caused a rise of one and a half per cent, and that it is only through some favorable counteracting circumstances that that result has been delayed or prevented. These are to be found in the abundant harvest and the change in the silk market, as well as in the supplies of Indian produce, which has in some degree diminished the specie shipments by the last and the preceding overland mail. Had the effect thus afforded happened in ordinary course, we should now probably have seen the rate of discount at 4 per cent. As it is, it has simply enabled us to limit the rise for the present, at all events, to 3, instead of carrying it to 7 per cent. Under these circumstances, this is no small satisfaction; but there is reason to believe that, even if further stringency should be experienced, we are not in any danger of seeing the approaching winter ushered in by a very extensive series of commercial disasters. Of course, the American failures must have told heavily on individual houses on this side, and there are also several branches of costly produce which have experienced wide fluctuations that may disturb the casual fortunes of speculators. There are likewise at all times a number of infirm establishments carrying on their business from hand to mouth, to whom the rise of a half per cent in the rate of discount after any long period of pressure is an inevitable sentence of destruction, and it is usually at the end of the year that such cases are developed. But as regards the broad trade of the empire, it is simply silly to discern a cause of fear. Month by month our commercial payments increase in magnitude, and yet are met with a punctuality never surpassed, and all the leading bankers will testify that, thus far, there is no absence even of those premonitory symptoms which have lately warn them of the possibility of a coming struggle long before the community at large have become awakened to it. Hence the belief may be confidently indulged that, although, with our universally diffused transactions, we must necessarily participate in every shock that occurs elsewhere—and there never was a time when prudence was more essential—our commercial prosperity, notwithstanding the Sepoy mutiny, is destined still to continue a marvel to the world.

The funds opened yesterday morning at the closing quotations of Tuesday, but subsequently experienced a fall of nearly three eighths per cent. The first transactions in money for money were at 89¾ to 90, from, which, on the announcement of the alteration in the bank rate of discount, they declined to 89⅝ to ½. At this they remained till near the termination of business, when the market showed increased weakness, the final prices being 89½ for money, and 90 to ½ for the new account on the 10th of November. The gloom at the end of the day was principally owing to a report that the features of the bank return to be published to-morrow evening will be much worse than has been anticipated, and but for the announcement of the arrival at Southampton of the expected £350,000 brought by the last Australian mail, still greater depression would have been experienced. India stock left off at 207 a 210; India bonds, 22s to 17s discount; and Exchequer bills, 4s to 4s discount.

The discount establishments have increased their rate of allowance to 8¼ per cent for money at call, and to 8½ per cent for deposits with short notice, being an advance of a half per cent. The rate of the joint stock banks for deposits will be 8 per cent.

The applications at the bank to day were numerous both before and after the alteration. In the discount market some exceptional transactions have been negotiated at 8½ per cent but the current rate for the choicest paper seems to be only an eighth below the bank minimum.

The French Three per Cents experienced a decline yesterday of ⅛ per cent, and the closing quotations this evening on the Bourse were 67f. 45c for money, and 67f. 65c. for the end of the month, showing a further fall of a quarter per cent.

The American crisis is felt severely at Paris, the remittances from New York on French account being delayed in the same manner as those to London. Money, which a week or two back was comparatively in good supply, is consequently in great demand, and nothing is obtainable below the charge of the bank of France. It is said the government have lately urged a reduction in the rate of discount, and that the bank, unable altogether to resist these influences, adopted on that account the recent relaxation in the margin required in advance on stocks and shares. The prospect now is, that even this measure will have to be rescinded.

The bank of Holland have to-day raised their rate of discount to 5½ per cent, an unusually high point for that establishment. It is only three weeks since the previous alteration was made, from 4½ to 5 per cent.

The letters by the last American steamer, while they show that the panic has assumed proportions which the most timid had failed to contemplate, contain nothing to alter the view that fright alone is the main cause of the daily rule, and that there is nothing in what is now passing which will for any length of time cripple the natural resources of the country. The extent of disaster, however, is most extraordinary, especially at Philadelphia, which at one time disputed with New York the claim to be considered the financial centre of the Union. Here nearly all the banks have suspended, including three whose aggregate capital amounts to £600,000. The chief of these is the Bank of Pennsylvania founded more than sixty years ago, and which has for some time conducted the business of the government, paying the dividends on the state debt, &c. Its capital was £270,000; its notes circulation, £110,000, and its deposits £390,000. The next is the Girard Bank, an institution of scarcely inferior standing, and which enjoyed the account of the city corporation. The capital in this case is £250,000, and the circulation nearly £100,000. The third in the Commercial, with a capital of £90,000 and a circulation of £52,000. The Merchants' Bank and several others had also stopped, and when the mail left the impression was that in the general rush the remainder would be forced to a similar step. At Baltimore concerted action seems to have been resolved upon at once, and it is probable that the simultaneous stoppage will be found in the end greatly to have lessened the mischief for all parties. The Lancashire failures at Philadelphia had almost all occurred before the banks went down. They had been exceedingly numerous, and as a large number were among importers of European goods, some heavy losses must necessarily fall on shippers from England and France. The liabilities of Caleb Cope & Co., an old established silk firm, are stated at £140,000. Those of Richard Patterson and Co., a sugar house, would also prove large, and were likely to cause embarrassments at New Orleans. The names of the other firms are too numerous to detail. Meanwhile, at New York there had been no great increase of pressure. Several additional failures had taken place, but they were not of remarkable magnitude, and the banks during the week had been strengthened by an increase of £270,000 in their stock of bullion, notwithstanding the loss of the £400,000 by the Central America. At Cincinnati and other places in the West there was likewise comparative steadiness. A report at New York that the Chicago, St. Paul, and Fond du Lac Railway had failed to provide for their floating debt of £90,000 and had made an assignment, had been contradicted. The Delaware, Lackawana, and Western railway with a similar floating debt, but, however, been compelled to take that course. The committee of investigation of the Michigan Southern Railway had issued a report stating the capital of the concern to be £2,000,000, its bonded debt £1,400,000, and its floating liabilities £380,000. At the meeting of the shareholders of the New York and Erie it was announced that the floating debt is about £900,000, and a committee was appointed to confer as to the measures for raising a loan to pay it off. Estimates were given of the working of the line for the current year, commencing the 1st of July, to show that 8½ might be expected to be realised as dividend upon the capital stock of £2,200,000. The bond debt is £5,000,000. Several railway companies were arranging uniform measures of economy and reform, and in some cases an increase of their tariff. The establishment of regulations for the New York Stock Board, on the basis of the excellent ones of the London Stock Exchange, was also strongly urged. An article in the *Tribune* helps to explain the occurrence of the present pressure while every mercantile interest appeared in a favorable condition, and confirms the impression that it is owing almost entirely to the railway distrust, aggravated as that has been by the efforts of a band of organised speculators. The bonds and stocks of these companies have been widely held by men of business, and trusted to as a reserve in case of need. Many of the banks, especially the inferior ones, have pursued the same course, and suddenly the whole of those millions of securities have been found totally unmarketable, except at sacrifices that involve ruin to their possessors. The quotations from the New York stock market on this occasion show no great increase of unsteadiness. Erie had fallen from 17¾ to 16½, New York Central from 66¾ to 65½, and Reading from 41¾ to 37½. Illinois Central remained at 88, and Michigan Southern at 19.

New Jersey Items.

MYSTERIOUS AFFAIR—SUPPOSED MURDER.—The circumstances of the finding of the dead body of a woman in the street were made public in Jersey City yesterday, about which there is as yet a good deal of mystery. The facts, as far as they have come to light, are these:—On Monday morning last, between the hours of 5 and 6, Mr. Wm. H Kensel, a grocer doing business at 45 Montgomery street, Jersey City, while on his way from Hoboken, discovered the body of a woman lying in Prospect street, a short distance south of the Rolling Mill. There was no one about there at the time, and Mr. Kensel, after taking a look at the body and satisfying himself that life was extinct, passed on, thinking that he might meet an officer, or some persons to whom he could communicate the circumstance. He did not, however, meet any one, and having urgent business to attend to, he passed on, hoping that some one else would find the body at a later hour and make the matter public. Two or three hours afterwards he related what he had seen, and other parties went to the spot and found that the body had been removed, but discovered marks of where it had lain in the sand.

A gentleman living in the Fourth ward, Jersey City, on Tuesday overheard a conversation between three or four wild young men about a frolic with a woman on Sunday night, and as this occurred in the vicinity of where the body was seen it is supposed to have some connection with this mysterious affair. Mr. Kensel says that the body was shabbily clad, and his impression was when he saw it that it was a street prostitute, who had come to her death from ill usage or exposure. The generally accepted theory is that Mr. Kensel was right as to her character, and that she had been in company with a party of men the night before, who had treated her in such a manner as to cause her death, and that the body was removed by them after Mr. Kensel had passed by there. The body has not been found; in fact, there has been no search for it, or any investigation made on the part of the authorities. This arises from there being no Coroner in Jersey City. Coroners were elected, but they neglected to qualify, and the city is in consequence destitute of such a functionary. It is presumed, however, that some magistrate will make an immediate investigation of the affair, and dispel the mystery with which it is at present surrounded.

THE ELECTION FOR COUNCILMAN in the Third ward of the city of Hoboken, to fill the vacancy caused by the expulsion of Mr. John Beard, resulted in the choice of Mr. Michael L. Allison. Mr. Allison was the candidate of the republicans, and received sixty votes, the whole number cast. The election excited very little interest, there being no opposition, as the democrats refused to run a candidate.

COUNTY CONVENTIONS.—The Democratic County Convention, for the nomination of candidates for Sheriff and Coroners, is to be held at Mortimore's Hotel, Hudson City, this afternoon. The Convention of the American party, for the same purpose, is also to be held this afternoon at Day's Hotel, Hudson City.

Personal Intelligence.

Mr. Allibone, till recently President of the Bank of Pennsylvania, accompanied by Bishop Potter, of the Protestant Episcopal Church, sailed from Boston on Wednesday in the steamer Niagara for Halifax and Liverpool.

ARRIVALS.

At the Clarendon Hotel—Sir Charles Fox, Charles Douglas Fox, Geo. Edward Jelery, England; Mr. and Mrs William H. Franklin, Westchester; James Parker Miss Parker, Boston; Mr. and Mrs Charles Eddston, Glasgow, Scotland; Mrs Edward Corbin, Troy; C. N. Beach, Philadelphia; Thomas Groom, Boston; Mr. and Mrs John Hobkard, Miss H Hobkard two master Hobkards, and two servants, Savannah; Miss Reid, Mrs. Richard Walmwright, three children and servant, do; John V. L. Pruyn, Albany; R. H. Odgen, New York; Lieut. Col. Rowan, R. A., British Army; G. B. Dorr, Lenox, Mass.

From Havre and Southampton, in steamship North Star—H Deppen, lady and four children; H F Alberti, lady and three children; Miana Hayes, Adel Rotner, G H Garlicks, C de donnel, J Wipperlings, Carl Reimer, Gustav Parber and lady, F W Hack, Emil Eggers, Mrs Griffith, Miss Meyer, J Heilmann, lady and children, Geo. Kreen, J D Beebe and lady, L Neeede, J Reohbach, Bernhard, Mrs Mrs O Gerhard, D Lehman, H Bommerstadt, S Biller, J Bosch, Gen Gourdi Diedebel m, Marie Gross, Louise de Montel and Bro, C J Kluge, lady and three daughters; A Scheper, C Franklin, H Gerdes, G Spengman and lady, Madam Reisig, Miss Boyd, M Lusker, R Franklin, Miss Pike and lady, Pike and lady, Louise Alexander and baby, A McIntosh and family, H Ouerfeldt, M Ouerfeldt, Marie Rische, J Huisf, W Heimbsbutte, Lina Meuers, Ella Lerch, Marie Reimers and baby, H Schmidt and lady, Fran Michaelis, J Obrock and family H Schutt, C Krohn and sister, G Weiler, A Wernsing, H Wernsing, F Alberman, F Wagner, J H Dammerman, lady and child; Clara Eisen, six children; H Steinmach, lady and two children; W Adams, J H Grambert, J Dressen, H Kohler, A Dackers, L Dunder, A Dunder, F Lauterer, B Kiefer, G Walter, Mrs Hallerman, A Hallerman, C Tiemann and child, D C Schaub and family, J Spiegel, C Tibbenhoff, H Kahn, H Meyer, R Meyer, L Loges, Wilh Gerts, M Schwab, Charles Carl, M Wickenberg, W P Gorrige, A Thompson, T P Wadsinger, H Moncet, Jul Monnet, F Chofuilla and sister, J Aubrey, C Parsons lady and sister; A C Burr, A C Burr, Madame Mayer and child, Matilde Dahl, E Calogne, T Rose, Rythmer, E Joy Morris and lady, A B Sandelier, A Sandelier, Mlle Lethuitz, Mlle Morchel, Madame Taupeau, Mrs Hammond, B Cismer, D Avenan, F Avenan, A Cardinal, J E Thomas, A Aubrey and lady, L Bernard, Mlle Bernard, Mlle Jeannes, H Noel and two children, L Lorens, C Havard, M S Anion, Catharine O'Neil, M Trollion and lady, A Busch, J Busch, E Peyrins, lady, two children and servant; R Lumloo and lady, G Fischer and lady, G Mann and two sisters, G M Fisher, N Valmonde, J Warding, H Romer and servant, R H Walker, McKean Buchanan, W Atkins, lady and two children, J Mallory, Miss E Doran, J Gregory, J E Perring, W Bunting, C S Putnam, Mrs S M Robb, C Sparrow, Mrs Ward and son, Y Lees, J H Bowly, W S Huxtax, T L Tolliches, D Dooher, C Weber and lady, R Zerwick, H Schloesstin, H Meierle and family, J Algiewood and lady, A Benning, O Senfleeben, H Senfleeben, A Senfleeben, H Rudolph, J Oberharding, M Martin, E Lassalle, T J Hoffauer, J H Hoffauer, W Diederoks, Barbara Lerch and daughter, V Strube, Miss Grocher, Marie Vogtt, Pauline Kaiser Agathe, Master P Schistterbeck, Mad Richers and three children, Mrs M Rembert, Miss J M Ryper, G B Henning, W G Henning, W G Henrics and lady, R Northrop, Mr Alman and four children, F Riedel, C Kanth, J Frey, A Hassen.

From Liverpool, in steamship Kangaroo—Messrs Alfred Smith, A J Menzies, Dr Bilcrest, J E Thompson and son, Webb, S Gregson, H G Mathson, W Poppleton, W Atkins, W Bernard, Bernard, W Thorntcroft, Hempton, Joseph Gillilan, Thomas Wall, George Flint, John Hall W Prescott, Sebile, W W Lyle, Mrs Ann Brierly and four children, Messrs Louis Appleton, Harry Lemon, Boulton, Mr Boulton, W Travers, lady and four children, Mr Cotton well, lady and son, John Bowie and lady, Mrs Bowie, Mrs Douglas, four children and servant, Mr Orton, lady and daughter, A Barker and daughter, J Stone and lady, T H Houghton, lady and two children, Mr Frankland, Miss Frankland, R Wilmer and daughter, Miss Josephine Flashman, Miss Flashman, Miss Jessie Mar Dennison and lady, Louisa Popworth, Mr Sullivan, lady and two children, A Punkett and daughter, Miss Cath Williams, Miss Aerzleb, Wm Brown and son, Mrs Fannay, J Bell, J McDonald, Lewis G Turnbull, James Hill.

From Richmond, &c, in the steamship Jamestown—Mrs Heath, child and nurse, Mrs A Barnes, John F Allen, Mrs C Armistead, W R Haughton, Mrs H Snydam, Dr D A Dodge and lady, Otto Bardenwerper and lady, Rev V Paien, W Buckley, W R Lawrence, J W Lawrence, D S Moore, John Price, W H Daniele, F B Hasebel, James Smith, Thomas Reeden, Jas Bacon, Charles Smith, H A Stoddard, and 50 in the steerage.

DEPARTURES.

In steamship Niagara, for Liverpool—Mrs Crowninghield, two Misses Crowninghield, Mr J McGlione, Mr and Mrs A C Winthrop, Jr, Boston; Messrs R P Manson, Maine; James Daly, Providence; Mr James, three Misses James, Messrs John Gibb, Pathas Hunt, M S Robertson, Miss Cook, and Mr White, New York; Messrs Thomas Moll, and C W Wharton, Philadelphia; Joseph Goodman, Chicago; Geo H Reed, Milwaukie; Mrs S Avrit, Wisconsin; Commodore Tatnall, and Mr Paul Tatnall, U S N, Messrs H Smith, Toronto; J Hamilton, Canada; Rev Smith, and R Smith, Nova Scotia; John Baxter, St Johns, N F; John Walch, Mrs Walch, Master Wm Roy, John Magnan and Miss Ham, England; Messrs Alexander Kennedy, Glasgow; John Dale Manchester; Capt Gillies, field Mrs Lilienfeld, and Mr Erfurcht, Russia; Mr Grenks, and Mrs Grenks, Canada—41. For Halifax—Mr James Henry, Cambridgeport, Ellen Holenberry and child, Gloucester; Mr Charles Dawson, California; Miss Elizabeth Robinson, Miss Martha Robinson, Mrs Hamilton, Messrs Augustus West, Thomas Mitchell, Col Haines, and Mr Joseph Robinson, Halifax; Messrs James Wilkrow, Toronto; J Alexander, Nova Scotia; S G Archibald, St Johns, N F—21. Total 56.

For Savannah in the steamship Thomas Swan—Mr Ragman, M W Leland, wife and child, R H Barnwell, Jerome Gaddy, George V Boulnage, J T Chase, Alex Smith, Miss H W Sherman, Jas A M Peck, Mrs M Robins, S Robins, James W Renton, G H Miller, R C Moore, Lee Abbot, R C Thomas, John Rivesll, Mrs A M Sherman, Miss W A Langley Mrs Mary E Coles.

ARRIVAL OF THE ARCTIC.

The Cruise of the Surveying Steamer Arctic—Deep Sea Soundings—Interesting Results—Survey of the Coast of Newfoundland, &c.

The United States surveying steamer Arctic, Capt. Berryman, arrived at this port yesterday noon from Halifax, after an absence of about three months.

Annexed is a list of her officers:—

Captain—C. H. Berryman.
Lieutenants—J. P. M. Mygatt, John Irwin, A. W. Weaver.
Engineer—John L. Albert.

The Arctic sailed from New York on the 11th July. The three months have been passed in deep sea exploration and in surveys connected with the ocean telegraph. Co-operation with the telegraphic squadron was indeed the primary object of her mission, completing her former surveys and examining into the practicability of other telegraphic extensions in connection with the great transatlantic scheme. This added to her Gulf Stream explorations, has made her present cruise of no little interest.

She arrived in St. Johns, N. F., on the 29th, and after coaling, sailed for Placentia Bay. This is a beautiful bay full of islands and harbors, opening on the southern front of the island; wild and barren, as is the whole coast, with scarce half a dozen hamlets in its entire limits. Now and then the dingy, reddish sail of a fishing jack was seen; but generally she was the only vessel in sight during a fortnight's stay. Doubling Cape St. Marys, the first stopping place on entering the bay is the little town of Placentia, with its three or four hundred people—a dreary spot, with its score of fishing smacks, its two churches (one Catholic and one Established), and its single genteel house, occupied by the agent of one of the great English firms which control all the trade of the island. The harbor is excellent—as rarity there—and following it back you stumble on half a dozen picturesque views. But the type of Newfoundland scenery is everywhere the same. On every side the same iron bound hills, with their scraggy growth of timber, and the same green sea ever coming in as the other element, with its fringe of fishing boats at anchor on the horizon. Below is the ruins of an old French fort, once held by a whole regiment, and even now easily traced, the commander of which blew out his brains in a fit of the most professional despair on finding that it was commanded by the hills bay end.

It was pleasant sailing up Placentia Bay, among the island groups that dot its waters, until dropping anchor at the mouth of a tiny river—the Come-by-Chance—which almost connects this with Trinity Bay on the north side. The neck of land is barely a mile over, and is to be the transit of the ocean telegraph, which will here leave the southern shore and connect with Nova Scotia, by a submarine cable of six hundred miles. Old Adams, who represents in himself and his five chubby children the entire population of this portion of Newfoundland, here reigns, Robinson Crusoe fashion, quite rich after his patriarchal way in cattle and fish. He is a fine specimen of mere physical preservation, having served through the Peninsular war, and is still a hale, hearty old man.

Commencing here, Capt. Berryman sounded down the bay in 70, 80 and 100 fathoms water to the banks off St. Pierre, selecting the proper line for the future submarine cable between Placentia and Cape Canseau.

Leaving the completion of this for another time their party returned to St. Johns to meet the telegraphic squadron. One week later found the Arctic in Trinity bay, the indentation corresponding on the northern side with Placentia on the southern. It is a noble sheet of water, stretching sixty miles into the land, with deep water and a bold rugged coast line. A reconnaissance was made, the Bay of Bulls selected as the terminus of the cable, and then a careful boat survey made of all its inshore portions of the line. The Bay of Bulls is an offshoot of the larger sheet of water outside, about ten miles long by half a mile or a mile wide, resembling one of some portions of Lake George, but wilder and more savage, with a large resident population of patridge, and snipe and curlew, and caraboo deer, quadruple the size of our species. Fishing and hunting of course in perfection. A week glided away pleasantly enough, running a perfect net work of soundings over its waters and all its approaches—discovering some dangerous ledges of rocks against which the cable would soon chafe itself away—but these can easily be avoided, and on the whole the depth of water and character of the bottom were eminently satisfactory. Leaving the Bay of Bulls, a fortnight was passed awaiting the arrival of the Atlantic telegraph squadron. Every day the log book has the same entry—"Sounding off and on the mouth of Trinity Bay." H. M. steamer Basilisk was generally in sight, having on board the Governor of Newfoundland and suite, and the smoke of the company's little steamer, the Victoria, could pretty generally be distinguished on the horizon—all as anxious and expectant as the Arctic. Every now and then a tiny speck on the horizon would keep their flagging world on the qui vive of expectation, which the fading away of the cloud or the appearance of three or four fishing smacks would dissipate. On the 5th August, standing into Trinity harbor, they learned the temporary failure of the scheme. The disappointment felt by their party was great; but further delay in Trinity Bay was useless. So standing to the eastward, Wednesday morning found them in St. John's harbor. On the 6th August the Arctic sailed for Placentia, completed the line of soundings to Cape Canseau, were out during the gale in which the Central America was lost, and on the 14th anchored in Halifax.

If the thousand and one tourists who pass its door would stop here, they would find a spot preferable to almost any of our appointed centres of summer resort. Society is good—made up entirely of official circles—and nature has been quite lavish in its beauties of flood and field. No wonder that Longfellow chose it as the home of his Evangeline. By the by, the half breed descendants of these Arcadian settlers form the most wretched specimen of the genus homo I ever met. The Arctic was quite a point of interest, and pleasant little parties were given on board. Among other visitors was the sister of Lord Napier.

Leaving here Capt Berryman resumed his deep sea soundings, meeting with unusual success, until the loss of his entire sounding line—several thousand fathoms—forced him to abandon the prosecution of the work. The plan proposed was to make soundings and thermal observations, at intervals of thirty miles, between Halifax and Bermuda, and thence home. This is only a portion of an elaborate examination that is being made of all the phenomena connected with the Gulf Stream, under the direction of Professor A. D. Bache, the head of our Coast Survey Department.

Cross sections have been taken at various points along our coast perpendicular to the axis of the stream, and soundings and thermal observations made.

These examinations have been conducted by Lieut. C. H. Davis, who examined in 1845 the section opposite Cape Cod; by Lieut. Bache, who explored the section off Sandy Hook; by Lieut. Lee, in 1847, who took the Cape Charles section. In 1848 Lieut. Bache repeated these observations on the Cape Charles section, and made others in the latitude of Cape Hatteras. In 1853 Lieut. Maffat repeated these, and examined the sections below Charleston and was succeeded by Lieut. Craven, who examined the various sections, cutting the Gulf Stream across its narrowest portions to the east of Florida. To these labors have been added those of Capt. Sands in 1855.

The principal instrument in these surveys has been of course the thermometer, and by its aid we are able to measure the amount and locate the limits of the Gulf Stream with no little accuracy. The temperature of the surface, being affected by a thousand causes, can be little relied on, but a systematic thermal examination at a depth of 15 or 20 fathoms has been effected. Temperatures were observed even in the depth of several hundred fathoms, varying at first by distance at less intervals, and afterwards, as the differences in temperature on descending became less perceptible, by greater distances between the thermometers. These observations showed that the Gulf Stream is comparatively a superficial current, and is undeniably by vast strata of cold water, so cold as to carry to Southern regions the temperature of the far North. The very amount of water that composes the stream has been measured, a section of its narrowest portion, between Florida and the Bemeni islands, having been sounded and the currents noted. The depth here is ninety miles, not exceeding at most 350 fathoms; indeed, few of these observations give any idea of the depth except in Southern latitudes, where it does not exceed a few hundred fathoms. The observations of Captain Berryman, crippled as they were by the loss of sounding apparatus, give us our most important data in this respect.

Soundings were made and submarine temperatures observed at depths varying from 800 fathoms to three miles. Compared with these results the observations of others in comparatively shoal water are of minor interest. In every instance specimens of the bottom were obtained, generally of what appeared a dark blue mud, but which, when examined with a powerful glass exhibited the same curious microscopic revelations observed in the specimens from the telegraphic plateau. But the most curious point were the temperatures from the bottom of the ocean. So imperfect is the apparatus for registering these submarine temperatures that contradictions will arise, but a constant repetition of experiments has proved that at a depth of three fourths of a mile and over exists a degree of cold unknown on the surface. At times the Saxton thermometers registered a temperature below zero. On one occasion attaching two of the same sounding line they registered at a depth of a thousand fathoms 10 and 11¼ degrees respectively. On the next trial, at a depth of 1,070 fathoms, both registered 10 degrees. In 1,296 fathoms water the two thermometers in use indicated, the one 10, the other 8 degrees, while in nearly every case where a comparison could be made between the registration of two or more, a greater difference than 10 degrees was very rare.

In the passage from Halifax towards Bermuda elaborate thermal experiments were made. Opening the note book at random it opens at station 111, October 10—5 P. M. At a depth of 800 fathoms the thermometer recorded 2 degrees; at 500 fathoms, 10 degrees; at 250 fathoms, 15 degrees.

At the next station, at a depth of nearly two miles, the thermometer exhibited a gradual increase from 2 degrees, 7 degrees, and 11 degrees near the bottom to 78 degrees on the surface. This apparently extreme degree of cold may be owing to the defects of the self-registering thermometer, but if so there is at least a very remarkable agreement of error.

At the last station, before the parting of the line and loss of their last sounding apparatus, the temperatures increased from a depth of nearly three miles in a very regular proportion, beginning with 36 degrees on the bottom and running up 44 degrees, 45 degrees, 46 degrees, 66 degrees and 84 degrees to finally 78 degrees on the surface.

Some of the depths obtained were enormous—the greatest reliable depths ever obtained. In every instance ample specimens of the bottom were brought up, and the agreement of the depth as recorded by the little sounding apparatus and the amount of line expended were in very exact agreement. Means of testing its accuracy were offered at every cast of the lead, and in no instance did contradictions appear. Some shoal water soundings in Trinity Bay tested this accuracy very beautifully—the depth being known with almost perfect precision by means of a small line and sinker—the self registering machine sinking to the bottom would show an agreement to a fathom.

On board of the Arctic opportunities offered of gleaning some valuable information bearing directly and indirectly on the the telegraphic scheme. To no one person in this scheme so largely indebted as to her commander, Captain Berryman, and it is to be regretted that one was not made of his experience in the abortive attempt at laying the cable. The very difficulty occasioning his loss, is the one most felt in these deep sea soundings—the proper management of the steam reel and the judicious use of the breaks. Nor is the sounding line very different from the Atlantic cable. The sounding wire in use on board the Arctic was of one half its weight and not one fifth its pliability; indeed, its absolute weight when suspended in the water, was equal, if not greater, and its flexibility less, yet this very cable was managed by the steam reel on board with all the ease of a spool of silk. In every sounding the operation of laying the cable and recovering it in safety, was effected. The experience gained in handling this line is valuable.

The temporary failure of the Atlantic telegraph has been productive of no little very dearly bought experience in the mode of laying it and the troubles to be anticipated in sinking a wire in depths exceeding one and two miles. Heretofore all submarine cables that have been laid have been in comparatively shoal water. Those between England and the Continent are in less than a couple of hundred fathoms. That on our own coast connecting Newfoundland and the main land, is in less than ninety five fathoms; the waters of the Black Sea, between Balaklava and Varna, where the English so successfully laid a telegraphic wire, are not deeper than our lakes, while those portions of the Mediterranean cable that have been successfully laid, are in less than a couple of hundred fathoms. It is only in the deeper portions, between Sardinia and Algeiro, where the depth increases to two miles, that both attempts have been unsuccessful.

The laying of the Atlantic cable thus entails difficulties which have never yet been overcome, owing to its immense length and the enormous depth of the water, exceeding two and a third miles. The nearest approach has been in the handling of these sounding lines, in which experience has been gained, which, if known on board the Niagara, would have prevented the loss of the cable. Nothing but the most atrocious blundering has ever occasioned the loss of these lines while paying them out, still is doing so every difficulty is overcome which is met in paying out the cable from the stern of the Niagara.

Aside from their connection with the Atlantic telegraph these ocean surveys have been of interest as developing the physical geography of the North Atlantic. A few years ago this volume of nature was a sealed book, which the sounding line and sinker and Maury's sounding apparatus and Brooks' and Sands' leads and Saxton's thermometer, with a score of other ingenious inventions, have all aided to open. For this knowledge the world is largely indebted to our own government and the labors of the officers of our navy—one deep sea exploration having thrown more light on the ocean bed of the Atlantic than all the world had done before. A narrative of such portions of these labors as are connected with the telegraphic scheme might be of interest; but it is difficult to throw interest into a detail so void of incident as the casting of the deep sea lead and the recording of its readings and the character of the bottom, but an interest is thrown over it by its connection with the telegraphic scheme. Thus connected, deep sea soundings become interesting. Even ladies talk learnedly of it and the wonders it shows. During its brief popularity it is well that the columns of the HERALD should give correct data as to the machinery in use and the modus operandi of conducting these deep sea explorations.

The simple and natural method of seeking to obtain these ocean depths with a simple line and sinker has been in use for the last century, and has been essayed by Ross, Depetit, Thours, and other officers of the English, French and Dutch navies. In his polar explorations Captain Ross obtained bottom at a depth of nearly one mile, bringing up a hundred weight of sub-marine specimens, with an apparition which he christened "a clam." This was in 1811, but was only used on a few occasions, and no systematic deep sea explorations were at that time attempted.

Some recent French Admiralty charts exhibit deep sea soundings everywhere dotting the Atlantic, but everywhere is appended a little mark of doubt, indicating the unreliable nature of these returns. To understand this the mind must be divested of all preconceived ideas of shoal water soundings where the lead descends in a few moments, and the sounding line tells the depth within the fraction of a fathom. In the ocean all this is different. The deep sea lead ceases to descend with any rapidity after the first few hundred fathoms, and is in great ocean depth often an hour in finding its way to the bottom. This is not faster than the drift of the ship, or than the currents would carry the line away. It is thus impossible to discern by which of these causes the sounding line is being carried away—by the sinking of the lead or the force of the current. Nor is the shock of the lead striking bottom perceptible to even the keenest perception.

This guide being taken away we must seek some other method of ascertaining the real depth. The one which has been adopted in the English and our own service has been with Maury's sounding apparatus, which makes use of the principle that a wheel turned by the passing of water will move in exact proportion to the rapidity of that passage, and if its revolutions were registered would indicate the exact distance it had been drawn through the water. In the construction of Maury's sounding apparatus this wheel is propeller shaped, and its rotations are registered by means of clock work. English officers in Halifax assured us that in her Majesty's service this is considered the only reliable means of learning anything in relation to depths exceeding a few hundred fathoms. It is now being generally adopted in our own service, in opposition to Lieut. Maury's opinion, who still clings to the old and exploded method of using the line and sinker, which is singular, as in his sailing directions the principle on which Maury's is constructed is lauded as working admirably, and, indeed is considered as quite worth copying as a competition.

The vexification of the surveys of the Arctic last year, which he denounced as worthless, has robbed his opinion on these subjects of the value his name would otherwise imply.

Mention has been made of Brooks' lead, which is an ingenious invention for detaching the sinker from the sounding line on striking bottom. The end gained is not material and even if so would be as well attained by Lead's, and a variety of other inventions.

Saxton's thermometer is a far more important invention. In great depths the pressure to which the instruments are subjected is such as to require special ones for measuring the temperatures. Many trials were made of different kinds of instruments, but the most successful was Saxton's metallic thermometer, which tells the temperature by the contraction and expansion of a spiral piece of metal. The sounding apparatus in use on board the Arctic was an adaptation of all these. First, the Saxton thermometers, attached a few fathoms above the lead; then Maury's sounding apparatus, so attached as to be affected by neither the rotations of the line nor of the sounding lead, which