

## THE ISTHMUS OF DARIEN.

The American Navy Department has now received the report and maps of the Tehuantepec surveying expedition, carried out under the command of Captain R. W. Shufeldt. This expedition was specially authorised by Act of Congress. A small corps of naval officers was detailed for the work, and the steamer "Mayflower" was placed under the orders of Capt. Shufeldt. The "Kansas" was also ordered to accompany the expedition, for the purpose of surveying the River Coatzacoalcos and its bar, and the "Cyane" was ordered to assist in the surveys of the harbours and lagoons on the Pacific coast. Surveys had been previously made for a railway, and the practicability of supplying the summit level with water was reported by Senor Moro in 1848. The main object of the expedition of 1871 was to determine the question whether a sufficient supply of water could be obtained for a ship canal across the isthmus. For this purpose a careful examination was made of the country near the lowest passes, under the supervision of Mr. E. A. Fuertes, C.E. Senor Moro's proposition being found to be impracticable, the attention of the party was next directed to the Rio Corte or Upper Coatzacoalcos, as affording the only solution of the water supply question; and it was found practicable, by means of a feeder, to supply upwards of 2,000 cubic feet of water per second. The report of the chief engineer of the expedition is accompanied by twenty maps and profiles, with many calculations to prove that a ship canal across the Isthmus of Tehuantepec is not only practicable, but that the obstacles to be encountered are of an ordinary character. It is assumed that the canal can start at the head waters of ship navigation of the River Coatzacoalcos, and run thence along its right bank and the valley of a tributary to the dividing ridge at Tarifa, descending through the Tarifa Pass, across the plains, to its Pacific terminus. The total length of such a canal will be 172 miles, including river navigation; it will require locks to overcome a height of 732 feet. The Coatzacoalcos River, forming the harbour on the Atlantic side, is well sheltered, and will require dredging at only a few points. The Salina Cruz Harbour, on the Pacific seaboard, is exposed to south winds, and a breakwater is proposed to convert this roadstead into a safe shelter. No estimates have at present been made as to the cost of the work, further surveys being requisite before they can be attempted.

As regards the survey of the Isthmus of Darien, it may be added that it was placed under the command of Commander T. O. Selfridge. The vessels "Guard" and "Nipsic" were detailed for the service upon the Atlantic coast, and the "Resoca" upon the Pacific coast. Commander Selfridge sailed from New York in December, 1870; and his attention in the course of last year was directed principally to that portion of the isthmus bordering upon the valley of the Atrato, and comprising the Tuyra and the Napipi routes. The route of the Tuyra and Atrato rivers having been reported upon favourably by former explorers, it was hoped that their reports might prove well founded. Five months were devoted to an examination of the route, and a line of levels 120 miles long was run from ocean to ocean. The country was found to be of so broken a character that Commander Selfridge pronounced this portion of the isthmus impracticable for a ship canal. The survey of the Napipi route was productive of far more favourable results, and Commander Selfridge considers that the possibility of a ship canal between the two oceans has now been demonstrated. The line adopted by Commander Selfridge commences at the mouth of the Atrato, in the Gulf of Darien, ascends that river for 150 miles to the mouth of the Napipi, and thence runs across in the valley of the Napipi to the Pacific Ocean at Cupica Bay. The Atrato is navigable for the whole of this distance for ships of the largest size, having a width of 1,500 ft. and a depth of nowhere less than 30 ft. The actual length of the necessary canal is about 31½ miles, the distance from the Atrato River to Cupica Bay; of this distance, 23 miles are over a nearly flat plain with a rise of 90 ft., and presenting no difficulties of construction. The remaining eight miles comprise considerable engineering obstacles, the hills rising to a height of 600 ft., and descending almost precipitously to the Pacific. Commander Selfridge's estimates of cost—for estimates have been made for the work—are based on a canal 120 ft. wide and 26 ft. deep; it will be necessary to construct a tunnel five miles in length, and the total expense of the whole work is set down at \$126,000,000, or about £30,000,000. The route, if it is ever developed—and its cost seems prohibitory for many a long year—will have excellent harbours at its termini.

An admirable paper by Prof. Wilson, of University College, published in the *Canadian Journal* for February, discusses at length the question of how far the general preference given to the right hand by man depends upon some fundamental peculiarity in his structure, or is merely acquired. The various theories which would account for the right-handedness of most men, by referring it to original peculiarities of internal structure, are shown to be apparently unsatisfactory. It is shown, also, that so far as we have any definite evidence, the right hand has been employed by preference over the left from the very earliest time, and that the same apparently instinctive preference is shown by savage races. Upon the whole, the author concludes "that with a certain number of persons, the preferential use of the right hand is natural and instinctive; that with a smaller number, an equally strong impulse is felt, prompting to the use of the left hand; but that with the great majority, right-handedness is mainly, if not wholly, the result of education. If children are watched in the nursery, it will be found the left hand is offered little less freely than the right. The nurse or mother is constantly transferring the spoon from the left to the right hand, correcting the defective courtesy of the proffered left hand, and in all ways superinducing right-handedness as a habit. As soon as the child is old enough to be affected by such influences, the fastening of its clothes, the handling of its knife and fork, and many other objects in daily use, help to confirm the habit until the art of penmanship is mastered; and with this crowning accomplishment except in cases of strongly marked bias in an opposite direction—the left hand is relegated to its very subordinate place as a mere supplementary organ to be called into use when the privileged member finds occasion for its aid. \* \* \* So far as enquiry reaches, we have no evidence of any left-handed tribe or nation, savage or civilized, unless the vague allusion of Stobaeus to a sure-footed and left-handed race, be considered an exception. Either therefore, the preferential use of the right hand is natural and congenital in a sufficiently large majority of the whole

human race to determine everywhere its predominance, or else the arbitrary usage, developed into habit and recognized law, has been derived from some primitive source. The latter is a tempting argument, not without its weight in reference to the unity and common intellectual inheritance of the human race. But, notwithstanding the apparent failure of the evidence advanced in favour of an organic one-sidedness finding expression in the prevalent use of the right hand, his own experience of the ungovernable impulse to prefer the left hand convinces him that a similar and more general bias in an opposite direction has its origin in organic structure.

The "Newspaper Press Directory" for 1872 states that there are now published in the United Kingdom 1,456 newspapers, distributed as follows:—England—London, 268; Provinces, 843—1,111; Wales, 60; Scotland, 134; Ireland, 134; British Isles, 17. Of these there are—82 daily papers published in England, 2 in Wales, 12 in Scotland, 19 in Ireland, and 2 in the British Isles. In 1862 there were published in the United Kingdom 1,051 journals; of these 60 papers were issued daily—viz., 42 in England, 1 in Wales, 9 in Scotland, 16 in Ireland, and 1 in Jersey; but in 1872 there are now established and circulated 1,456 papers, of which no less than 117 are issued daily, showing that the press of the country has very greatly extended during the last ten years, and more especially so in daily papers; the daily issues standing 117 against 69 in 1862. The magazines now in course of publication, including the quarterly reviews, number 639, of which 230 are of a decidedly religious character, representing the Church of England, Wesleyans, Methodists, Baptists, Independents, and other Christian communities.

**NEW MATERIAL FOR PAPER**—The San Francisco *Bulletin* says:—S. D. Baldwin of Marysville, has secured a patent from Washington, as the discoverer of a process of making paper from the California tulle, known in botany as *scirpus lacustris*. He has been experimenting with the tulle as a material for paper a number of years, and has succeeded in producing a fine pulp, capable of being made into the best quality of writing and printing paper. Using the tules cut in June, he obtained from 50 to 60 per cent. of pulp, as fine and strong as Sea Island cotton. His discovery has been carefully tested by experts in the paper business in this country and in Europe, who are satisfied that it furnishes a most economical paper stock, which is destined to come largely into use. The process of reducing the reed to pulp is very simple and cheap, and it is believed a larger percentage can be obtained by taking the tules later in the season, when fully matured. Mr. Baldwin's discovery is one of great interest to the paper trade, and as the tulle is so abundant here, it promises to be of great value to California. We believe it is intended to embark in the new manufacture as soon as the necessary arrangements can be made. The practical utility of the discovery is evidenced by the fact that in Europe another variety of lake reed is already being so largely used in the manufacture of paper that the prices of certain sorts have been reduced, and news paper, into which this material enters, is now being imported into this State from Europe cheaper than it can be brought from the East. With such an abundance of the new material at hand, so much cheaper than rags or other stock used in this country, it ought to be feasible to give a great impetus to paper-making in this State.

The odour of a substance is in most cases adherent, like colour or any other physical property, and not accidental or extraneous. Where, as in the case of kerosene oil or the lighter petroleum naphthas, the substance is a mixture of many constituents, it is difficult to decide which of them is the objectionable one, and so long as this has not been determined, we can devise no rules for getting rid of it, or for destroying it in any other way. Practically, therefore, we are unable to deodorize the products, and especially the lighter ones of the distillation of petroleum; but we may conceal them in the same way as formerly the disagreeable odours incidental to sick-rooms and even to ordinary apartments were hidden by the liberal use of strong smelling liquids or the fumes of incense. The best adapted fluid for this purpose is, perhaps, the artificial oil of bitter almonds or mirbane oil; a little of it will go a great way in disguising the odour of petroleum effectually, and as it has a very high boiling point, it will accomplish its purpose most durably.—*Druggist's Circular*.

The Puget Sound *Despatch*, of January 15th, states that the western terminus of the Northern Pacific Railroad has been fixed at North Whatcom, at the mouth of the Nook Sakh River, twenty-three miles south of the British line, and about six miles north of the old town of Whatcom. A long, narrow island in front of the town divides Bellingham Bay from Lunie Bay, and upon this island the company intend to build their depot and warehouses. The name of the place they will change from North Whatcom to Puget City. Much of the land between this place and the British line has already been taken up by German immigrants, three or four hundred families of whom are already on the ground. Puget City has been laid off into blocks and lots of 20 feet front, by 140 deep, which have been sold at \$100 each. Work upon the main line of the railway is to be commenced at Puget City in the spring. The road from the port of Kalama, on the Columbia River, to the main trunk, has been completed, and the cars are already running on a section of twenty-five miles of this branch line.

At last the Tichborne trial is finished—so far at least as the claims of the plaintiff are concerned—and finished in a sudden and unexpected manner. Upon the opening of the court on Tuesday week the counsel for the claimant to the Tichborne estate announced that their client had decided, in view of the action of the Jury on Monday in saying they had heard sufficient evidence whereon to base a verdict, to withdraw his cause before the court. After this announcement of the counsel for the plaintiff, the counsel for the defence asked Chief Justice Bovill to issue a warrant for the arrest of the claimant on a charge of perjury, and to fix his bail at £50,000. The petition was granted, and a bench warrant was issued for his arrest. He was taken into custody shortly after and conveyed to Newgate prison, where he now lies, being unable to give the requisite bail.

## MISCELLANEOUS.

A minister at a coloured wedding who wished to be humorous, said: "On such occasions it is customary to kiss the bride, but in this case we will omit it." To which ungallant remark the bridegroom pertinently replied: "On such occasions it is customary to pay the minister \$10, but in this case we will omit it."

Alphonse Karr was once present at a banquet given in commemoration of the birth of Hahnemann. Toasts being given to the health of every medical celebrity, ancient and modern, the President remarked, "Mr. Karr, you have not proposed the health of any one." The poet rose and modestly replied, "I propose the health of the sick."

A man in Memphis, desiring to see the Grand Duke, took off his coat and carried a large Saratoga trunk on his shoulders up-stairs, thus evading the police, who had strict orders to keep all strangers out of the Peabody House. After carrying a 200 pound trunk up two flights of stairs, he didn't see the Grand Duke, and found somebody had stolen his coat.

The sea is said to be rapidly encroaching on Tybee Island, Georgia, famed during the war. The ravine in which the Confederate troops drilled in 1861 is now a salt water pond during high tides. The remains of the United States soldiers who fell victims to the cholera in 1868 are exposed to view by the shifting of the sand which has laid bare their shallow graves.

A New England engineer lately dreamed that one of the forward trucks of his engine was cracked. When he awoke he had a premonition lest his dream might prove true, and thought he would go down and see that everything was right. On examining the engine at the engine-house he found the truck precisely in the same condition as he had seen it in his dream, and another engine had to be substituted in its stead.

The correspondent of the *Cologne Gazette* who was present at a Republican meeting in Trafalgar Square states, as his experience, that he was, in the most artistic manner, disembarassed of his watch, a souvenir of the first London Exhibition, and worth about forty guineas. The artist, if a Republican, is requested to send the watch on the day when he shall become President of the English Republic, to the manager of the *Cologne Gazette*, who will thankfully acknowledge the receipt.

The Danbury (Conn.) *News* says:—"A young lady in a neighbouring town has taken up dentistry for a living. All the gentlemen patronize her. When she puts her arm around the neck of a patient and caresses his jaw for the offending member, the sensation is about as nice as they make 'em. One young man has become hopelessly infatuated with her. Consequently he hasn't a tooth in his head. She has pulled every blessed one of them; and made him two new sets and pulled them. She is now at work on his father's saw. He holds the saw."

Mr. Francklyn, the agent of the Cunard Company in New York, has offered to carry the Wednesday mail from New York to Queenstown absolutely free, on the sole condition that the American Post-office will bring the bags to the steamer's wharf. The Postmaster General would be enabled, by this bold and patriotic offer, to reduce the postage on letters from America to England to four cents. The Cunard Company show that the carriage of the mails by their boats last year would have avoided serious delays, and they make their splendid offer in the interests of the mercantile community.

It is said that the proposition to establish great gambling houses in Paris is likely to be adopted. The advocates of it have just brought forward their strongest argument—namely, that the Germans are extremely uneasy at the prospect of the Paris gambling tables causing the Baden-Baden, Ems, Homburg, and Wiesbaden establishments to be deserted. It is well-known that the German Government has determined that the houses in the Empire shall be closed, but there is an idea that a little spite can be shown by setting up rival rouge-et-noir tables, for which reason the whole population of France will probably be in favour of it.

Perhaps the heartiest laugh of the Tichborne trial was produced by the Attorney-General, Sir John Duke Coleridge, in the course of his speech on the 25th January. The learned counsel read a letter to the court and jury written by the claimant under the name of Roger Charles Tichborne to his "dear mamma," the dowager. The reading was accompanied with comments, and was thus concluded: "And he finishes," said the Attorney-General, "with this edifying piece of religion. 'God bless you, my dear mamma, and may our Holy Mother protect you,' and, although he possibly does not mean it, it reads—'Protect you from your affectionate son, R. C. TICHBORNE.'"

In a recent edition of the "Principles and Practice of Physic," by John Watson, one reads, "Mr. Marson has been the resident surgeon to the London Small-Pox and Vaccination Hospital for the last thirty-four years. He has always made it an imperative rule that every nurse and other servant of the hospital should, on entering the service, be vaccinated. In their case it is generally re-vaccination, and it is never afterwards repeated. These nurses live in the closest daily and nightly attendance upon small-pox patients, and the other servants are constantly exposed to the profuse contagion, yet in no single instance during these thirty-four years has any one of these servants and nurses been affected with small-pox."

Off the coast of Ecuador, near Point Sant Elena, lie the remains of a once magnificent Spanish frigate, sent out by the Government of Spain, in 1802, to collect tribute money. After collecting about \$5,000,000 she was wrecked on her way to Panama, and now lies where she has lain for seventy years, in the direct track of navigation, and only 600 feet from the shore. The Spanish Government recovered from the wreck about \$600,000 in the early part of the century, and in later years about \$400,000 was got up by an enterprising individual. It is now proposed to make a decisive effort to recover the rest of the immense treasure sunk in the sea, and an expedition has left the California coast with that object. Hydraulic machinery of great calibre, and the wonderful engines of the Pacific Coast Wrecking Company, are to be employed.