

and which he so nobly volunteered to undertake, on his return to England, last autumn.

An Aberdeen paper says of Mr. Kennedy, and the prospects generally:

At the time he left Beechy Island, Wellington Channel was open and free from ice as far as the telescope could command a view, and it is the opinion of Mr. Kennedy, as well as of the officers of the *North Star*, that from the remarkable openness of the season, the arduous equator would occupy a more advanced position than any of the previous expeditions could reach. Describing the state of this channel to Captain Penny, who is at present in Aberdeen that gentleman expressed his firm conviction that if the steamers are pushed forward with energy they might get through at Behring's Straits.

The crew of the *Prince Albert* are all in good health and spirits. The expedition, it will be remembered, was fitted out entirely at the expense of Lady Franklin, and, although it has not been successful in the main object of its search, the discovery of this new channel, and the search of Prince Regent's Inlet and North Somerset will tend to concentrate efforts now entirely on Wellington Channel as the only hope of discovering Sir John Franklin.

Sir Edward Belcher thinks that Franklin did not hurry off from Beechy Island in 1843, as has been generally surmised. Here is an extract from his last letter to the Admiralty dated August 14.

Immediately on my arrival at Beechy Island, accompanied by Captain Kellett, I proceeded with service parties, under the command of Commander Richards and Lieut. Cheyne, to examine closely Beechy Island and coasts adjacent for records of the missing expedition, but without the slightest incident of importance. After a most laborious search, including the lines of direction of the head boards of the graves, and head and foot, as well as at ten feet distance, and throughout the loose earth, no trace, not even a scratch, on the paint work, could be traced. Upon very mature consideration, aided by Captain Kellett and Commander Pallen, I arrived at the conviction that no hurry in removing from these winter quarters can be traced. Everything here bears a stamp of order and regularity; and although it is a matter of intense surprise, and incomprehensible to all, it is my firm conviction that no intention of leaving a record at this position existed. Other reasons occur to me for such determination, the principal of which is, that Sir John Franklin would not consider this as a likely spot for inquiry, and it is evident that by mere chance only they happened to fall upon his traces. If I am asked why? my reply is that, at Cape Riley, or any other more prominent or accessible position, beyond the discovery of former visitors, Sir John Franklin would place his beacon: certainly not here.

The discovered graves of the dead will be remembered. A trace of the living has also, it seems, been found. A paragraph from one of the many summaries says:

Lieut. Hamilton in a letter addressed to Captain Kellett, commanding H. M. ship *Resolution*, reports that at a spot called Caswell's Tower, near Beechy Island, to which he and some other officers of the expedition had walked, his attention was attracted by one of Edwards' small potato cases, and he writes:

"On searching we discovered several of Goldner's preserved meat canisters seven or eight wine bottles, a fire-place, and a small well, the bottom of it was lined with small stones. A pathway of large flat stones led to the well. No cairns or documents were found. These articles evidently belonged to some of Sir John Franklin's parties: most probably a shooting party. I then ascended the tower, which is about the same height as Beechy Sound, but much steeper. Neither cairns nor documents were found."

Taken altogether, we look with profound interest for further information, whether it come through Behring's Straits or from Baffin's Bay. The former might come upon us at any moment. The latter scarcely until the autumn of next year.

### The Bridges of London.

Among the chief architectural glories of London rank its bridges. Rome can boast of a finer church—Berlin a nobler museum—Paris incomparably grander palaces. But what capital of Europe can show seven such structures as span the waters of the Thames between Vauxhall and the Custom House? Canova declared it was worth a journey all the way from Rome to London only to see Waterloo Bridge. Paris has a greater number of bridges, it is true; but the Seine is a river considerably less wide and deep than the Thames. The same may be said of the Spree and its channels, at Berlin—a stream too remote from the sea to be affected by its tides. The Danube at Vienna is not a tidal river, yet the Austrian capital is content with a wooden bridge across it. As to the Rhine, though not much wider than the Thames at Hungerford for two or three hundred miles, it has no bridge nearer to its outlets on the German Ocean than Bale in Switzerland. But unique as is our system of metropolitan bridges, it has ceased to be adequate to the wants of the swarming life on its banks. It necessarily demands enlargement as the population on both sides of the river increases in amount:—and at the instance of Mr. Benceoch a proposal for a new bridge, between Blackfriars and London Bridges has been referred by the city authorities to the consideration of a committee. The new span Mr. Benceoch proposes to call St. Paul's Bridge. The case for a new bridge across the Thames is conclusively made out by its proposer.

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### ANASTATIC PRINTING.

Considerable interest was manifested in London a few years ago by the discovery of a process of multiplying or reproducing indefinitely, fac-similes of documents or engravings, however, elaborate, and likely from its cheapness entirely to supersede lithography. The discovery was made by Mr. Rudolph Appel, a native of Silesia, eight or nine years ago, and termed by him Anastatic Printing. Mr. Appel went to England to push his fortune, but not having patented his invention it soon became public property. Some slight failures in the process, perhaps from this very cause, that the parties who had appropriated the invention had not learned all the secret, caused the discovery to be looked upon as a little theoretical. At the Great Exhibition in 1851, however, a prize was awarded to the inventor, and since then public attention has again been drawn to the process; not only on account of its merits; but also on account of its dangerous nature, if not strictly guarded against. Copies of cheques and Bank notes may be taken by this invention so correctly as to defy the closest scrutiny, and bankers have been deceived again and again, when examining notes and cheques forged by this resurrection process. Messrs. Glyn and Appel have, however, manufactured and patented a paper for preventing forgery by the Anastatic Press. In order that some idea may be formed of the difficulty to be overcome, we will subjoin from the *Art Journal* a very comprehensive account of the actual operation of Anastatic printing:

"The print of which an Anastatic copy is required is first moistened with very dilute nitric acid—one part of acid to seven of water—and then being placed between bibulous paper, all superabundance of moisture is removed. You will easily understand that the acid being an aqueous solution will not have

attached itself to the ink on the paper; printer's ink being of an oily nature, and if the paper thus prepared be placed on a polished sheet of zinc and subjected to pressure, two results will follow.

In the first place the printed portion will leave a set off or impression on the zinc, and secondly the nitric acid attached to the non-printed parts of the paper will eat away and corrode the zinc, converting the whole, in fact, into a very shallow stereotype. The original being removed—perfectly uninjured—the whole zinc plate should next be treated with gum water, which of course will not stick to the printed or oily part but will attach itself to every other portion of the plate.

A charge of Printers' ink being now applied, this in its turn only attaches itself to the set off obtained from the print.

The final process, consists in pouring over the plate a solution of phosphatic acid which acts on the non-printed portion of the zinc, and produces a surface to which printers ink will not attach. The process is now complete and from such a prepared zinc plate any number of impressions may be struck off.

The uses to which this ingenious invention may be applied are various, for instance, copies of rare prints may be obtained without the aid of an engraver. Reproductions of books, or works out of print, may be had without setting up the type; authors may illustrate their own works and fac-similes of pen-and-ink sketches may be had at very inconsiderable expense."

It may be seen from this description that without some safe guard, forgery upon a large scale could be easily effected. The antidote is offered by the patent paper invented by Messrs. Glyn & Appel. It is as beautiful from its simplicity, as it is efficacious in its operation. It consists merely in impregnating or dyeing the pulp of which the paper is made with an insoluble salt of copper. After a series of experiments, the patentees preferred phosphate of copper to any other salt, and for this purpose sulphate of copper, and phosphate of soda are successively mixed with the pulp, which produce an insoluble salt, the phosphate of copper. Besides this a very small portion of a peculiar oily and non-drying soap is introduced, which affords a double protection.

The result of the copper being introduced into the paper is, that should a forger attempt to submit a note or cheque printed on this patent paper to the Anastatic process, washing it, as previously described, with dilute nitric acid, and subjecting it to pressure on a zinc plate, a film of metallic copper is immediately deposited between the cheque and the zinc, not only preventing the set-off, or transfer of the impression, but cementing the paper so firmly to the zinc that it can only be separated by being destroyed.—Thus the forger is punished by losing his note, the public is protected, and the banker benefited. Hitherto the safety of the banks has been in the elaborate engraving of the notes used, so that no one except a skilful engraver, could give a correct fac-simile, and such an engraver is not likely to attempt a forgery for the sake of the money to be derived from his labours, so that the work is entrusted to reckless but it may be expert hands, and this leads to the detection of the offence. It is different, however, with the Anastatic process, for any one who understands lithographic printing, may with the aid of a zinc plate, a little nitric acid, and a press, produce so perfect fac-similes of notes and cheques as to defy scrutiny.

**HORNED RATTLE SNAKE.** Mr. William H. Thomas, of Quality Low, Haywood county, N. C. writes to the *Asheville News*, that a Cherokee Indian named Selola, captured a snake on the Smokey Mountains, which he describes "of the usual size of the Diamond Rattle Snakes found in the mountains of this country, of a dark color—on its tail has ten rattles, and on its head two forked horns of about three-fourths of an inch long." The Indian said it seemed to be a king among the snakes of its species. Nothing of the kind has been hitherto seen by any of the old or white inhabitants.