

## FAR-FAMED HERAT.

The Stronghold Over Which England and Russia are Quarrelling.

While Herat possesses immense interest historically, it occupies geographical importance of such a nature as for many centuries made it the central point for furious fighting among tribesmen and nations. Again and again it has been made the focus for Persian fury and ambition, and it is only by continual hard fighting that it now remains in the hands of the Ameer of Afghanistan. When England obtained, by intrigue, chicanery and hard fighting, the dominant control of Hindostan she fully recognized Herat as one of the points d'appui from which an enemy might threaten that dominion, and hence it became the fashion to name the city "the Gate of India."

Situated picturesquely upon a spur of the Hindoo Koosh range, and surrounded by a bewildering network of deeply irrigated rice fields—so bewildering that cavalry operations are made impossible with any freedom of action—Herat is at the same time powerfully fortified artificially. Recent Russian travellers have averred that nowhere in the East is the art of canalization carried out so thoroughly or on so vast a scale as it has been in the valley of Herat, where the waters of the Herri Rod are utilized to the utmost extent. This state of circumstances naturally makes Herat a valuable basis of supplies for any army that may be fortunate enough to obtain possession of it. It is therefore no wonder that Herat has become a singularly important point of Central Asian commerce, roads forking from it into Persia, Kabul, Kandahar, to Beloochistan, and northwards through the Merba oasis, and Turkestan which is known as Bokhara.

The city is nearly quadrangular, with faces about a mile long, and the high inner wall of defence is pierced by four gates pointing toward the different great cities with which it has communication. Thus, for instance, the great gates in the celebrated walls of Delhi were known as the Lahore Gate, the Cashmere Gate, and so on. The stupendous earthwork upon which Herat is built has been the wonder of modern times, being, according to Sir Henry Rawlinson, the great Eastern authority on such matters, 250 feet in width at the base, fifty feet high, crowned by a wall 25 feet high, and 14 wide at the base, and supported by no fewer than 150 circular towers, which again are protected by a ditch 45 feet wide and 15 in depth.

There have been disputes about the true strength of the fortress. In 1846 General Ferrier, of the British army, gave it as his opinion that the place was only an immense redoubt, which a European army could reduce in twenty days, but it is significant that in 1837, with the assistance of two English engineer lieutenants, the Heratees successfully held at bay for ten months a Persian army of 35,000 men supported by fifty pieces of artillery, which were in many cases directed by expert Russian officers.

The mosques of Herat are made exceedingly picturesque by bluish-tessellated tiles; the bazars are rich, and swarm day and night with motley groups of men from every part of central Asia, Afghanistan and India; and bearing in mind all these facts, together with the fortuitous geographical position of Herat, it is no wonder that the famous city is coveted both by Russia and England. It possesses the unenviable reputation of being one of those cities so happily situated by nature that it must become perpetually the object of every powerful nation placed in its vicinity.

## The Art of Wild Beast Taming.

About two weeks ago, as Edward Williams, a professional trainer of wild beasts, was going through his performances in a Paris circus, a lioness that had long been under his care sprang upon him. He managed to get out of the cage after a most desperate struggle with the infuriated animal, but was terribly lacerated, and soon fainted from loss of blood. Still more recently, a man engaged in a like occupation in Vienna was almost instantly killed by a lion whose cage he had entered, and was nearly devoured in the sight of several thousand spectators. These occurrences have caused several papers in Europe to demand that a stop be put to the practice of allowing persons to enter the cages of wild beasts for the purpose of affording entertainment to spectators. There is nothing new about these occurrences. A large number of persons who have entered the cages of beasts naturally will have never come out alive. Still, many tiger-tamers and lion-trainers have lived to a good old age and died in peaceful beds, leaving corpses that were not disfigured by scars of any sort. Van Amburgh went into the cages of wild beasts as frequently as the politicians of Chicago who are crying for reform visit grog-shops, and never received any injury. Carter entered the cage of wild beasts almost every day for about fifty years, and never had a scratch from one of them. Maccome outlived half a dozen generations of lions and tigers, and is now reported to be living in Italy, hale and hearty, and ready at any time, despite his great age, to subdue a lion for any showman. Bidel, the greatest wild beast tamer France ever had, stated that he had no more fear of lions, tigers, and leopards than he had of cattle, horses, and donkeys, and that he had never been injured by any of the former, though he had by the latter. He held his art in high esteem, and considered it of value to the world.

Many persons appear to have a natural gift for subduing and training wild beasts that are by nature ferocious. A few weeks ago, a professional in an English travelling circus boasted of the skill he had acquired in training animals that no one else could manage. The spec-

tators applauded him as the "lion of the day." Whereupon a quiet man in the crowd asked permission to enter the cages alone, which was granted. He handled the lions, tigers, and bears as if they were kittens, put them through all the tricks they had been accustomed to perform, and deliberately came out of the cages. Several successful trainers of wild animals have been persons of scientific attainments, but many have been ignorant negroes and uneducated Hindoos. Courage and presence of mind are necessary endowments of the trainer of wild beasts. He must have nerve and quickness of action. Some species of animals are subdued by persistent kindness and the exercise of continued patience. Others are brought into subjection by exciting their fear. Among the same species of animals are some that are soon rendered tame and others that always retain their savage instincts. Few of our boys would be afraid to enter the cage of "Old Bob," the pet grizzly bear whose home has long been in Union Park. He has been a very amiable animal since his childhood. Still, his brother was a savage monster who would as soon devour a school-boy as a young fawn. Bears of nearly all species are very intelligent animals, and some of them are exceedingly playful and amusing. Pet bears are very common in India, and nearly every regiment has a bear that is regularly fed with rations furnished the soldiers. It is said to be a singular fact that bears bred in captivity are dangerous and difficult to render tame than those caught in their native wilds when of mature size.

## FACTS AND FIGURES.

There are over fifty penitentiaries and 2,400 gaols in the United States. They contain 50,000 criminals, and their estimated cost is \$500,000,000.

Mary is the most common of all names in England, there being 6,819 out of every 50,000 individuals answering it. William comes next, with 6,590.

The value of the fishmaws and shark's fins exported from India to China last year was Rs. 600,000. The value of the product of Bombay mills, mostly cotton twist and yarn, exported to China was Rs. 16,200,000.

Nearly 4,000 miles of underground telegraphic cable has been laid in Germany, crossing seventy rivers, and seven or eight miles is laid under water. Most of the cable contains seven wires and the rest four.

The American Machinist gives the number of locomotives belonging to American railroads at 29,227. Reckoning the life of a locomotive at twenty-five years, there should be 1,169 of them constructed in order to maintain the stock. A car wheel lasts about eight years; American cars are using 10,000,000 of them and produce 1,200,000 yearly.

In 1884 there was not a single death from small pox in either New York or Brooklyn. Boston, Baltimore, and San Francisco had each one death; Chicago 2 Cincinnati 22, Philadelphia 35, and New Orleans 291. New York takes the lead in deaths by measles, diphtheria, and whooping cough; Philadelphia in deaths by scarlatina and typhoid fever, while Boston heads the list with deaths by diarrhoeal disease, having over 800 cases more than New York.

The Prussian army counts among its higher officers 4 Field Marshal Generals, 53 Generals of Infantry and cavalry, 77 Lieutenant-Generals, 130 Major-Generals, 256 Colonels, 276 Lieutenant-Colonels, and 1,143 Majors of all arms. Of the Lieutenant-Generals about 5 per cent do not belong to the nobility; of the Major-Generals 18; of the Colonels 28, of the Lieutenant-Colonels 41, and of Majors about 43 per cent. This proportion is nearly reversed in favour of the bourgeois element for the category of Captains and subaltern officers. A singular fact is that the number of iron Crosses worn by officers is becoming smaller and smaller; the highest number in any one regiment is 26 in the Twentieth Infantry.

## A Ferocious Sparrow Fight.

With the advent of the pugnacious English sparrow, which, if it carried a hip pocket, would most certainly be liable to early apprehension for carrying concealed weapons, more innocent members of the feathered family took to the woods, and, having no other foes to face, these diminutive agents of the street-cleaning department fight among themselves with extreme desperation and a fearless disregard of their surroundings. Yesterday afternoon two of them, for reasons best known to themselves, came to an issue, and, seeking a clear place on the sidewalk in Vine street, went at each other at an awfully wicked way. There were no police in sight to stop the mill, and soon the two birds were surrounded by a dense crowd of men. The little belligerents clutched and scratched and presumably swore at each other in choice sparrow talk. One of the bystanders finally stooped down and picked them up. They perched in his hand and fought with unabated fury. Then he pulled them apart, but they fluttered back to the sidewalk and clinched again. Once more he raised them in his hand and with the same result. Again he drew them apart and again they returned to the icy pavement and a settlement of their difference. The crowd became excited and made a rush for the center. The principals, amazed at this wholesale interference, took flight and settled on the telegraph wire above. There they perched and pecked away at each other with a ferociousness that was positively barbaric. After some minutes one took flight, and, followed by his still angry, chattering antagonist, disappeared over the adjacent roof in the city park.

## Lord Nelson's Flag-Ship.

I feel quite sure that few Canadian boys have visited Lord Nelson's flag-ship, the glorious old "Victory," on whose deck the gallant admiral received his death-wound October 21, 1805, in that famous battle in the Bay of Trafalgar. The "Victory" led the attack against the combined navies of France and Spain. It was Lord Nelson's mightiest victory, and the power of France on the ocean was destroyed. The good old ship still presents a fine appearance, and looks strong enough for another sea-fight. Few of her original timbers remain, however. The "Victory" floats high out of water, and her port, from which the cannon have so often proclaimed England's victories are mostly closed, and the few guns on board are used only for firing salutes. The British flag still waves from the mast, and a small company of sailors guard the ship.

After coming on board, an escort is provided. Visitors are requested to register their names and contribute a trifle toward paying for this escort duty by the crew, whose chief employment is to show visitors the interesting places on board. We first went on the main-deck. A brass plate set in one part of this deck is inscribed, "Here Nelson fell." Our guide said that "Lord Nelson had no right to stand near this spot," and that "he was killed by one of his own men, who shot him from the cross-trees"; but we did not care to listen to such a story, believing, rather, as indeed is the truth, that Nelson was killed by the enemy.

The great deck, as it now appears without a single gun, looked lonely enough. We descended by way of the decks between the cock-pit, where the gallant sailor died. It is a damp, gloomy, and silent place, where, on that eventful day, and at the close of Nelson's greatest battle, the great chief was tenderly carried. The gallant hero had requested that a mantle be thrown over him, so that, as they passed through the decks, he might not be recognized, lest his crew should lose heart in the desperate struggle. Around him, in the moment of death and of victory, stood a few of his faithful officers waiting for his spirit to take its flight. It was at Southsea that the hero had embarked to fight the enemies of his country. The spot is now marked by one of the "Victory's" old anchors; and to the same spot, later, came the returning boats in solemn procession, one of them bearing the remains of the hero of Trafalgar. What a contrast! England can well afford generous honors to such a naval chief.

## Suspended Animation.

As we descend in the scale of animal life, we find that what kills the higher animals does not injure the lower. Cut a polyp in two and you have two living polyps instead of one dead polyp. Break off a lobster's claw, and another one will grow. You may freeze a fly, but you cannot freeze it to death. The following, from the *St. James Gazette*, not only refers to another possibility of infusorial life, but shows how a human life may be prolonged without the person's having any consciousness:

Men have made strange pets in their time. Mr. Jabez Hogg keeps some of the strangest, in the form of a few of the infusoria called "wheel-animalcules." These rotifers have many curious qualities, among which is that of suspending animation for an indefinite period without ceasing to live. Colonies of rotifers may be "desiccated" and rendered apparently lifeless; and in this condition they may be kept for months and years, and possibly centuries. A single drop of water will restore them to life, and the wheel-bearers will instantly resume their functional activity "precisely at the point where it was so rudely broken off."

This reminds us of the story, often repeated, though possibly not capable of standing the strictest investigation:

A British sailor at the Battle of the Nile, at the moment when the officer of the watch said to him, "Do you make out the flag-ship on the port or star-board bow, Bill?" was struck by a bullet in the head. For fifteen months that sailor remained insensible, but not dead, with a ball in his skull which could not be extracted.

In the fulness of time he was taken to Greenwich Hospital and trephined, when the foreign body was removed from the neighborhood of his brain.

Then he rubbed his eyes and said instantly, "just off the star-board bow, sir."

## Household Hints.

The leaves of geraniums are an excellent application for cuts, where the skin is rubbed off, and other wounds of that kind. One or two leaves must be bruised and applied to the part, and the wound will be cicatrized in a short time.

The following recipe will be found excellent for breakfast or luncheon: Mince any kind of cold meat, season with pepper and salt, and add a few bread crumbs. Cover the bottom of scallop-shells or small saucers with the meat, putting in each a bit of butter; break a fresh egg on top of each and set in a hot oven; when the egg begins to cook sprinkle a little cracker powder on it and a dust of salt. Serve hot.

If those who have wild ducks to dress will sprinkle powdered rosin well among the feathers, rubbing in well so it penetrates the down, then pour boiling water over and let stand a minute, they will find the picking an easy matter, the feathers coming off in handfuls, leaving the bird perfectly clean, requiring no singeing even.

Coffee made with distilled water is said to have a greatly improved aroma. It seems that the mineral carbonates in common water render the tannin of the coffee berry ruder, and the drug will not dissolve in distilled water.

## READABLE ITEMS.

Nancy Nance, Nancy Dance, Nancy Hance, Nancy Vance, and Nancy Mance are mentioned as residents of one of the counties of Georgia.

A bottle of medicine was prescribed to a Toledo man, with directions to take "a teaspoonful in water three times a day." He took it daily—in his bath tub—and got well.

Mme. Adrinette Palu has just died at Saint Pierre de la Martinique at the age of 121 years. She had a distinct recollection of all the principal events of the French revolution.

The Sutlej, one of the great streams of British India, is probably the swiftest large river in the world; it has a descent of 12,000 feet in 180 miles, an average of about 61 feet per mile.

An alligator 27 feet and 7 inches long was recently caught out of Lake Wimlico, Florida, by Wyman Jones. He killed Florida dogs with one sweep of his enormous tail after he had been dragged ashore.

The railways in England are severely affected by the general depression. People don't travel, because they can't afford it. First-class passengers ride third, and third-class passengers hide under the seats and dodge the ticket-collectors.

The *Pacific Medical Journal* referring to a recent writer who asserts that Maine lumbermen are free from dyspepsia because they are in the habit of using chewing gum, says that "if he would add to his suggestion of chewing gum that of becoming a lumberman the remedy would be very effective."

The *Medical World* reports a case, now under observation, in which the patient's hair—which had become prematurely gray—is slowly returning to its original color under the internal administration of phosphorized cod liver oil. The *World* had previously noted similar restorations under the same treatment.

In an article on "Inebriety among Railroad Engineers," in the *Philadelphia Medical and Surgical Reporter* it is stated that these men are exceptionally temperate. The nerve and brain exhaustion attendant upon their occupation is so great, however, that "inebriety among them is very precipitate and fatal."

The present month, it is said, will witness direct steam communication by water between Cologne and London. The Baden Screw Steamship Company of Mannheim has had constructed in Holland a double screw boat for both river and ocean navigation, which is built of steel, of 750 tons burden, drawing 8 feet on the Rhine, and, by water-ballast, 11 feet at sea.

A French statistician has discovered that up to the present, 2,540 emperors and kings have governed 64 nations. Out of this number 300 have been driven from their thrones, 64 have abdicated, 24 have committed suicide, 12 have become insane, 100 fell in battle, 123 were captured, 25 died martyrs, 151 have been assassinated, and 108 have been condemned to death and executed according to law.

The enormous wealth of the Orleans Princess is chiefly derived from Louis Philippe's mother, who, in consequence of the death of her brother, the Prince de Lamballe, became the sole heiress of her father, the Duke of Penthièvre, the richest subject of France. The Duke died in 1793. His daughter had two days before his death been divorced from her worthless husband, who was thus debarred from touching her property.

Fifty years ago France imported only 7,000 tons of oranges per annum, one-third of which were imported by way of Marseilles. The total importation of oranges into France in 1884 amounted to about 50,000 tons, 42,000 tons of which came from Spain. The imports from Algeria have risen from seven tons in 1836 to 5,000 tons in 1874—a fact which Frenchmen regard as another marvellous effect of progress of their beautiful African colony.

Many pains and penalties attach to the office of Irish viceroy in these days, but in the presentation kisses at the drawing room he is sometimes permitted to taste many sweets in full. Some girls are so frightened about this kiss, and some so eager, that they give instead of waiting to receive. It is an odd idea, one which evidently originated in a more kissing age than ours. One can imagine what Lord Spencer may think of what does Lady Spencer think!

According to the *Building News*, manufacturers of wood mosaic say that they have found by experiments that hard maple on end is from four to five times as durable as marble and equally as durable as the hardest baked tile. It is reported that two end-wood floors were laid in the elevators of a public building in Chicago about fifteen months ago, and that the floors are in as good condition as when first laid, although each elevator carries from 1,000 to 2,000 people daily.

Lord Durham's income is precisely what the late Lord Lansdale's was when he succeeded his father—£71,000 a year; and it is thought that Gladys, Countess of Lansdale, the bereaved widow, was at one time, at all events, not unwilling to assist, as Countess of Durham, in getting away with a second income of the amount named. At present she is reduced to a pitiful £5,000 a year. Her marriage with Mr. Edgar Vincent seem indefinitely postponed. He hasn't £71,000 a year.

The English camel corps in Egypt is a novelty merely renewed from the Roman army in the East. Mr. Robert Mowat, the editor of the *Bulletin Epigraphique*, reminds us that about the year 420 Thebes, the capital of Upper Egypt, was garrisoned by a wing of military dromedarians, whose very name—*Ala prima Valeria dromedariorum*—indicates, that they had been founded by the Emperor Diocletian more than a century previous, and had retained, as an honorary title his own family name of Valerius.

## INTERESTING SCIENTIFIC ITEMS.

The eucalyptus will not grow in the hill districts of the province of Assam in British India.

News comes from France that cremation will shortly be recognized by law in that country, as a legal mode of disposing of the dead.

Observations made at seventeen meteorological stations in Prussia indicate that, in forest-covered districts, the daily variations of temperature are less than in the open country.

According to the Bulletin of the French Scientific Association, there has not been a single death by lightning in the city of Paris or in the Department of the Seine since the year 1864.

Mr. Ellis Lever offers a sum equivalent to twenty-five hundred dollars as a prize for the invention or discovery of a safe substitute for gunpowder in coal-mining operations.

An expedition will be fitted out at the Melbourne observatory to observe the total eclipse of the sun on the 8th of September next. The party will go to New Zealand, which is said to be the only land in the world from which the total phase can be seen. The duration of totality is but two minutes and a half.

The death is announced of the well-known French balloonist, Mons. Louis Godard, who made a most perilous ascent with a dozen persons in a monster balloon, some twenty-two years ago, and was nearly killed by being dragged along the earth when coming down. His knowledge of aeronautical science was of considerable value to the French during the Franco-German war.

The Boulder Committee of the Royal Society of Edinburgh has made a report ascribing the boulders in Scotland to "an oceanic current from some north-westerly quarter, bringing masses of floating ice, with boulders upon them, which boulders were deposited on the hills, then submarine, when the ice stranded on these hills." The committee will not undertake to say from what country these boulders must have come.

The Medical Society of the Hospitals in Paris has set on foot an inquiry into the contagiousness of pulmonary consumption. Questions on the subject have been addressed to all physicians practising in France. Similar efforts to collect information in England and in Germany have not proved specially successful. Of twenty-three thousand English practitioners only fifteen hundred answered, and in Germany but two hundred out of sixteen thousand.

In an abstract from *Comptes Rendus*, Professor John Trowbridge, of Harvard College, gives an interesting account of a series of experiments made to ascertain how far the light of day penetrates into the waters of Lake Geneva. It goes down to a depth of five hundred and fifty feet, where it is about equal to the brightness of a clear night without any moon. The curious fact is recorded that in cloudy September weather the light descends further than in the bright days of August.

A case of lockjaw, caused by a wound to the hand, has been successfully treated at the Sunderland infirmary, in the north of England, by the use of a lad fifteen years of age. Chloral and bromide of potassium were the principal medicines administered. The patient was abundantly supported by nourishing food, and the utmost care was taken to maintain an equable temperature of 65 degrees Fahrenheit in his room, while he was rigorously guarded against draughts of air.

A comparison between the condition of Sir Richard Temple, with a view of ascertaining whether the population of China is exaggerated in the native statistics, which show that the number of inhabitants is now over three hundred and forty-nine millions, being two hundred and twenty-seven persons to the square mile. In British India there are one hundred and eighty-three persons to the square mile. Sir Richard Temple concludes that there is probably no great exaggeration in the Chinese figures, although he deems them somewhat in excess of the truth.

## Making Hard and Soft Soap.

A correspondent gives the following: Provide five pounds of tallow, or three pounds of tallow and two pounds of resin (use any proportion of resin you please within a limit of two-fifths of the whole.) Melt the tallow and resin together, let them cool to 120 degrees by the thermometer, then pour into this mass slowly the lye made from one pound of caustic soda, 98 per cent pure, and two and one-half pints of cold water. Stir the mass very thoroughly while pouring in the lye. The aim is to intimately distribute the lye through every part of the grease. When it is well distributed, the mixture will drop from the stirrer like honey. Pour this now from the kettle into the box lined with an old cloth, to prevent from sticking. Set it in a warm place and wrap it well with blankets for forty-eight hours. Then cut it into cakes to suit. This is good hard soap when sufficiently dried. It is but hard soap not succeed at the first trial. The first time I tried the lye was not combined with the grease, so that when it was poured into the box the lye ran out through the bottom of the box, and I lost it; a second trial brought good soap. I would advise you to get, or have your druggist get, caustic soda, 98 per cent pure, at about 10 cents per pound. But do not accept any so-called concentrated lye, or other special preparation, cheaply exposed for sale. Once more get three pounds of soda for three trials. It costs but little, and if any trial should fail put it into a kettle on the stove a few minutes with water added. Boil it and you will have soda soft-soap—a white jelly.