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## THE

# CANADIAN SCHOOL GEOGRAPHY, 

## THOMAS EWING;

AUTHOR OY PRINCIPLES OF ELOCUTION, RGETORICAL EXERCISEE, THE ENGLISH LEARNER, A SYSTEA OF GEOGRAPHY AND ASTRONOMY, AND A NEW GMNERAK atlag.

## MONTREAL,

 ARMOUR \& RAMSAY; umgston, ramsay, armour \& Co.; hamiliton, A. h. armovi \& co.$$
1843
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PRINTRD BY
ARMOUR \& RAMSAY,
MONTREAL.

EWING'S
CANADIAN SCHOOL GEOGRAPHY

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## PREFACE.

In the course of different visits which the Author of the following little work has paid to Canada, he has been struck with the great diversity, and for the most part, the antiquated and inferior character of the Books used in the Schools throughout the Province. In no branch of study was this more observable than in that of Geography :-the greater portion of the Text Books appear to be imported from the United States ; and, as might be expected, while they contain much information respecting these Republics, they dismiss summarily what it is most necessary the British Colonial youth should be rendered most familiar with-their own Parent country and its dependencies. The author has endeavoured to supply the deficiency, by producing for the use of Elementary Schools the present work, which is upon the same principle as his "System of Geography," a book which has gone through about twenty editions in Britain, and has been extensively employed in all the principal Roarding Schools and Academies. That the Canadian School Geography may merit a like favourable reception, is the anxious wish and expectation of

The Author.

> Montreal, February, 1843. \}

## EWING'S

## GEOGRAPHY.

GEOGRAPHY IS A DESCRIPTION OF THE EARTH AND ITS INHABITANTS.

## INTRODUCTION.

## I. On the Sun, Earth, and Moon.

1. The Sun, Earth, and Moon, are bodies resembling a sphere or globe.
2. The Diameter of the Sun is nearly 890,000 miles; that of the Earth 8,000 ; and that of the Moon 2,180.
3. The Sun is more than $1,300,000$ times the magnitude of the Earth; and the Earth nearly 50 times the magnitude of the Moon.
4. The distance of the Earth from the Sun is about $95,000,000$ miles; and, from the Moon 240,000.
5. The Sun has one motion, which it performs round its axis in about 25 days, 14 hours, 8 minutes.

## 14

6. The Earth has two motions; one round its axis, in 24 hours, called its diurnal motion, which causes the apparent motion of the heavenly bodies from East to West, and the alternation of day and night ; another, round the Sun, in 365 days 6 hours, called its annual motion, which causes the difference in the length of the days and nights, and the various seasons.
7. The Moon has three motions; one, round the Earth, in about four weeks, which causes the Moon's apparent increase and decrease, and produces the eclipses of the Sun and Moon; another, round its own axis, in the same time ; and a third, round the Sun, along with the Earth, in a year.

## II. On the Solar System.

1. Besides the Earth and its attendant the Moon, other bodies revolve, in a similar manner, about the Sun, and receive their light and heat from him. All these revolving bodies, together with the Sun, form what is called the Planetary or Solar System.
2. The Solar System consists of the Sun, the Primary Planets, the Secondary Planets, (called also Moons or Satellites,) and Comets.
3. There are 11 Primary Planets, Mercury, Venus, the Earth, Mars, (Vesta, Juno, Ceres, Pallas,) Jupiter, Saturn, and the Georgium Sidus, called also Uranus or Herschel.
4. There are 18 Secondary Planets; of which the Earth has one; Jupiter, four ; Saturn, with his Ring, seven ; and the Georgium Sidus, six.

## 15

round motion, eavenly ation of in 365 which ays and
, round ases the nd proanother, a third, year.
e Moon, r, about at from er with tary or un, the (called Sidus, which , with ix.
5. Comets are luminous bodies, or a kind of planets, which move round the sun, in very eccentric orbits.
6. The solar system is but a small part of the universe. Those celestial bodies, called fixed stars, which are completely unconnected with the solar system, are, by astronomers, considered as so many suns, each communicating light and heat to revolving planets or worlds.

## 1II. On Maps.

1. A map is a representation of the Earth, or a part of it, on a plane surface.
2. The top of a map is towards the north, the bottom towards the south, the right-hand side towards the east, and the left-hand side towards the west.
3. Latitude is the distance of a place north or south from the equator; longitude is its distance cast or west from the first meridian.
4. The latitude upon maps is expressed by figures on their sides. If the figures increase upwards, the latitude is north; if they increase downwards, it is south.
5. The longitude is expressed upon maps by figures along the top and bottom. When the figures increase towards the right, the longitude is east; but, when they increase towards the left, it is west.
IV. Natural Divisions of the Earth's Surface.
6. The surface of the Earth consists of land and water.
7. A continent is a large tract of land. An island is land surrounded by water. A promontory or cape is a portion of land running into the sea. A peninsula is land almost surrounded by water. An Isthmus is a narrow neck of land joining two portions of land together.
8. An Ocean is a large portion of salt water. A Sea is a smaller portion. A Lake is water surrounded by land. A Bay is a portion of sea running into the land. A Gulf is water almost surrounded by land. A Strait is a narrow passage of water between two seas.

## MAP OF THE WORLD. (a)

## Continents.-North America, South America,

(a) The circumference of the Earth is 21,600 Geographical miles, of 60 to a degree; or 25,020 British miles, reckoning $69 \frac{1}{2}$ to a degrec. The surface of the Earth contains about 196 inillions of English square miles, and seearly three-fourths of it are covered with :vater. The number of inhabitants on the face of the Clobe is generally computed at about $800,000,000$; of whom

Europe is supposed to contain........... 230 millions. Africa do do ........... 70 do America do do ........... 40 do Asia, with Australasia and Polynesia… 460 do
Of the surface of the Globe, Sens and Lakes occupy about 145 millions of English square miles, or nearly three-fourths; and ihe dry land occupies 51 millions, or rather more than one-fourth. The extent of the great divisions of the world is respectively as follows :-
Europe, with its Isles, . . . . . . . . . . . . . . . . . . . 3,700,000 square miles.
Africa, with Madagascar,................... 11,400,000 do
Continental Asia,…........................16,100,000 do
$\left.\begin{array}{c}\text { Asiatic Islands, including Australasia } \\ \text { and Polynesia,.................... }\end{array}\right\} \begin{gathered}4,200,000 \\ \text { do }\end{gathered}$
North America,............................... 8,100,000 do
South America, . . . . . . . . . . . . . . . . . . . . . . . 6,420,000 do
American Islands,. . ............................ 160000 do
Greenland, as far as known, ............... 620,000 do
50,700,000 do

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## sraphical

 ig $69 \frac{1}{2}$ to inillions covered e ClobeEurope, Asia, Africa, (b)
Oce ns.-Atlantic, ( $c$, Pacific or South Sea, (d), Indiais Northern or Arctic, Southern or Antarctic.

## NORTH AMERICA.

Boundaries.-N. Northern Ocean; E. Baffin's Bay and the Atlantic ; S. Isthmus of Darien; W. Pacific.

Divisions.-British Possessions, United States, Texas, Mexico, Gautimala, Russian Territory, W. Indian Islands.

Islands.-Newfoundland, Bermudas, Bahamas, Fox Islands, King George III's Island, Prince of
(b) There are in fact only Two Grand Continents, the Eastern Continent or the Old World, comprehending Europe, Asia, and Africa; and the Western Continent or the New World, comprehending North and South America. Europe, Asia, Africa, and America, are called by Geographers the Four Quarters of the Globe. The Great Islands of Australasia are now reckoned a Fifth Division.
(c) The Atlantic Ocean takes its name from the Mountains of Atlas in Africa; and from the fiction of Atlas carrying the Worhd on his back, the name Atlas, applied to a collection of Maps, dexived.
(d) When Magellan entered this Ocean, in 1520, through the dangerous strait that bears his name, he sailed 3 months and 20 days, in a uniform direction towards the N.W. without discovering any land besides a few small islets. In the extreme ciistress which ne suffered in this voyage, before he reached the Ladrone Islands, he had the consolation, however, of enjoying such an uninter. rupted course of fair weather, with favourable winds, that he bestowed on this Occan the name of Pacific, which it still retains. The Spaniards, having passed the Isthmus of Darien, from North to South, at the discovery of this Ocean, named it the South Sea.

Wales' Island, Queen Charlotte's Island, Quadra or Vancouver's Island.

Mountarns.-Appalachian or Alleghany,Andes, or Cordilleras, Rocky Mountains:

Lakes.-Superior, Michigan, Huron, Erie, Ontario; Champlain; Nicaragua, Slave Lake, Athabasca, Winnipeg, Great Bear Lake.
Bays, Gulfs and Straits.-Baffin's Bay, Davis' Straits, Hudson's Bay, James' Bay, Straits of Belleisle, Gulf of St. Lawrence, Fundy Bay ; Gulfs of Florida and Mexico ; Bays of Campeachy and Honduras ; Gulf of California; Nootka or King George's Sound, Behring's Straits.

Capes.-Farewell, Chidley, Charles, Florida, St. Lucas, Alaska, Prince of Wales.
Rivers.-Mississippi, Missuuri, Ohio, St. Lawrence, Columbia, Mackenzie's, Copermine.

BRITISH POSSESSIONS IN NORTH AMERICA.
Boundaries.-N. Northern Ocean; E. Baffin's Bay and the Atlantic; S. United States; W. Russian Territory and Pacific.

Divisions.-1. Canada, (East or Lower, (a) and West or Upper, (b); 2. New Brunswick, (c); 3. Nova Scotia, (d) ; 4. New Britain, (including Hudson's Bay or New N. and S. Wales, E. Main, and Labrador); 5. Newfoundland; 6. Cape Breton; 7. Prince Edward 1sland ; 8. Bermudas ; 9. Anticosti, Pictou, St. Pierre or St. Peter's, Miquelon, \&c , in the Gulf of St. Lawrence.

Bert New ter, Kin ville Pict das, burs Gue deri urst She nol but the Bor Ger

Quadra
y, Andes,
h, Erie, e Lake, 's Bay, , Straits dy Bay ; npeachy ootka or

Florida,

Towss.-1. Quebec (e), Montreal, Three Rivers, Berthier, William Henry or Sorel, Sherbrooke, New Carlisle, Douglastown, St. John's or Dorchester, St. Hyacinthe, St. Andrew's, L'Assomption; Kingston, Toronto, Niagara, Queenston, Brockville, Prescott, Perth, Cornwall, Bytown, Belleville, Picton, Cobourg, Port Hope, Peterborough, Dundas, Ancaster, Simcoe, Hamilton, Malden, Amherstburg, Sandwich, Chatham, London, Goderich, Guelph, Woodstock, Barrie,St. Catherine's ; 2. Fredericton, St. John's, St. Andrews, Dalhousie, Bathurst, Woodstock, Miramichi, Richibucto; 3. Halifax Shelburne, Annapolis, Liverpool or Port Rossignol ; 4. There are no Towns in these Territories; but several Forts and Trading Ports belonging to the Hudson's Bay Company ; 5.St. John, Placentia, Bonavista; 6. Sydney ; 7. Charlottetown; 8. St. George.

Islands.-Anticosti, Orleans, Montreal, Jesus ; Grand Manitoulin, Isle Royale.

Mountains.-S. Chain, along the source of the Rivers which fall into the S. or right bank of the St. Lawrence in Lower Catada; the N. Chain; along the source of the Rivers which fall into $\mathbf{N}$. or left bank of the St. Lawrence, extending from below Quebec to the River Ottawa in Lower Canada.

Lares.-Temiscaming, Two Mountains, Abbitibi, St. John, Memphremagog, Megantic, Temiscouta, St. Francis, St. Louis, St. Peter ; Ontarin,
(e) Qucbec was built by the French in 1605. The British reduced it and all Canada in 1626 ; but it was restored in 1632. In 1711, it was besieged by the English without success; but was taken by them in 1759, after a battle memorable for the death of General Wolfe, on the plains of Abraham, at Quebec, in the moment of victory; and was confirm $d$ to them by the peace of 1763 .

## 20

Erie, Huron, Superior, Nipissing, Simcoe, St. Clair. ( $f$ )

Bays.-Fundy, Chaleurs, Miramichi, Gut of Canso, Straits of Belleisle.

Capes.-Sable, Ray, Race, Charles, Chidley.
Rifers.-St. Lawrence, Ottawa, St. Maurice, Cartier, Montmorency, Saguenay, Chambly or Sorel or Richlieu, St. Francis, Chaudiere ; Trent, Grand, Thames; Madawaska, and the Rideau which enter the Ottawa.
(a) The Province of Lower Canada, comprehending the three principal Districts of Quebec, Montreal and Three Rivers, and the two Inferior Districts, Gaspe and St. Francis, is sribdivided into 36 Counties * of-1. Vaudreuil, 2. Ottawa, 3. Lake of Two Mountains, 4. Montreal, 5. Terrebonne, 6. Leinster, 7 Berthier, 8. St. Maurice, 9. Champlain, 10. Port Neuf, 11. Quebec, 12. Montmorency, 13. Saguenay, 14. Gaspe, 15. Bonaventure, 16. Rimouski, 17. Kamouraska, 18. L'Islet, 19. Bellechasse, 20. Dorchester, 21. Megantic, 22. Lotbiniere, 23. Nicolet, 24. Yamaska, 25. Drummond, 26. Sherbrooke, 27. Stanstead, 28. Missiskoui, 29. Shefford, 30. St. Hyacinthe, 31. Rourille, 32. Richlieu, 33. Vercheres, 34. Chambly, 35. Huntingdon, 36. Beauharnois. Each County returns one Member, who added to two each from the cities of Quebec and Montreal, and one each from the Towns of Three Rivers and Sherbrooke, make the share of Lower or Eastern Canada in the representation of the Provincial Legislature to amount to 42
( $f$ ) The length, breadth, depth, and circumference of the four great Lakes are-
Lakes. Length. Breadth. Common Depth. Circum. Superior.... 120 leagues 48 leagues 80 to 150 fathoms 500 leagues Huron..... 84 do 80 do 60 to 100 do 380 do Erie........ 82 do 21 do 13 to 17 do 180 do Ontario .... 70 do 20 do 60 to 90 do 160 do
*The Counties are divided into Seigniories and Townships. The Parishes sometimes contain but one Seigniory; sometimes, an the contrary, a Parish is formed of several Seigniories or Townsships, either entire or divided.
(b) $T$ District hurst, 5 toria, 9 13. Gor 18. Wes Gaol ar to that District each on of Toro Hamilt Upper gislatur In th gary, Carlto 11. Ler 14. No 16. Sim West $R$ Riding: sex, 25
(c) 1 St. Joh lotte, 6 Glouce (d) Halifa Lunenl Breton
Nate are the the cel where and 15 that on height
$\dagger \mathrm{Tr}$ subdiv
$\pm N$
subdiv
(b) The Province of Upper Canada is divided into the 19 Districts $\dagger$ of 1. Eastern, 2. Ott wa, 3. Dalhousie, 4. Bathurst, 5. Johnstown, 6. Midland, 7. Prince Edward, 8. Victoria, 9. Newcastle, 10. Colborme, I1. Home, 12. Niagara, 13. Gore, 14. Talbot, 15. Brock, 16. Wellington, 17. London, 18. Western, 19. Huron. As soon as a Court House and Gaol are completed in the Town of Barrie, and a Proclamation to that effect issued, a new District to be called the Simcoe District will be cstablished. The Counties and Ridings return each onc member to Parliament, which uith two from the City of Toronto and one cach from Kingston, Brockville, Cornwalh, Hamilton, Niagara, Bytown, and London make the share of Upper or Western Canada in the representation of the Legislature to be 42.

In the above 19 Districts, the 27 Counties are,-1. Glengary, 2. Prescott, 3. Stormont, 4. Dundas, 5. Russell, 6. Carlton, 7. Lanark, 8 Grenville, 9. Leeds, 10. Frontenac, 11. Lenox and Addington, 12. Hastings, 13. Prince Edward, 14. Northumberland, North and South Ridings, 15. Durham, 16. Simcoe, 17. York, four Ridings, 18. Halton, Eask and Weist Riding's, 19. Wentworth, 20. Lincoln, North and South Ridings 21. Haldimand, 22. Oxford,23. Norfolk, 24. Middlesex, 25. Kent, 26. Essex, 27. IIuron.
(c) New Brunswick is diviied iuto the 10 Counties of-1. St. John's, 2. Westmoreland, 3. King's, 4. Qucen's, 5. Charlotte, 6. York, 7. Sunbury, 8. Northumberland, 9. Kent. 10. Gloucester.
(d) Nova Scotia $\ddagger$ is divided into the 10 Counties of- 1 . Halifax, 2. Sydney, 3. Cumberland, 4. Hants, 5. Kings, 6. Lunenburg, 7. Qucen's, 8. Annapolis, 9. Shelburne, 10. Cape Breton.
Natural Curiosities.-The chief Natural curiosities in Canada are the Great Lakes, Rivers and Cataracts. Among the latter are the celebrated Falls of Niagara, between Lakes Eric and Ontario, where the fall of the River, on the Canadian side, is 2,101 feet wide, and 150 feet high. A small Island lies hetween the Falls; and that on the side of the United States is 1,140 feet broad, while the height is 164 feet. From the Great Fall a cloud of spray ascends,
+The 19 Districts are divided into 27 Counties, and the Counties subdivided into Townships. There are no Scigniorics.
$\ddagger$ Nova Scotia comprehends 5 circuits. The 10 Counties are subdivided into Districts and Townships.
which may sometimes be seen at an incredible distance. The noise is often heard at the distance of 15 miles. The whole scene is truly tremendous.

## UNITED STATES.

Boundaries.--N. British Possessions; E. Atlantic ; S. Gulf of Mexico, Texas, and the Mexican States ; W. Pacific.

Divisions.-Northern States or New England, 1. Maine ; 2. New Hampshire ; 3. Vermont ; 4. Massachusetts ; 5. Connecticut ; 6. Rhode Island.

Middle States,-7. New York ; 8. Pennsylvania, (District of Columbia); 9. New Jersey ; 10. Delaware.

Southern States,-11. Maryland; 12. Virginia; 13. North Carolina; 14. South Carolina, (a); 15. Georgia; 16. Alabama.

Western States.--17. Ohio ; 18. Indiana ; 19, Illinois ; 21). Kentucky ; 21. Missouri ; 22. Tennessee ; 23. Mississippi ; 24. Louisiana; 25. Arkansas ; 26. Michigan.

Territories.—27. Florida ; 28. Wisconsin ; 29. Iowa; 30. Oregon.

Capiral 'Towns.-Northern States.-1. Augusta ; 2. Concord ; 3. Montpelier ; 4. Boston ; 5. Hartford and Newhaven ; 6. Providence.

Middle States.-7. Albany ; 8. Harrisburg, (Washington); 9. Trenton; 10. Dover.
(a) S. Carolina is divided into Districts, and Louisiana into Parishes; the other States into Counties. The subdivisions bear the name of Townships in the Northern States, New York, New Jersey, Pennsylvania, and Ohio; and that of Villages or Townships in the other States.

Sou mond geville

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Virginia; (a); 15
ana ; 19, 22. Ten25. Ar-
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-1. Auoston ; 5.
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siana into isions bear Cork, New or Town-

Southern States.-11. Annapolis; 12. Richmond ; 13. Raleigh; 14. Columbia; 15. Milledgeville; 16. Tuscaloosa.

Western States.-17. Columbus; 18. Indianapolis ; 19. Vandalia; 20. Frankfort; 21. Jefferson City ; 22. Nashville ; 23. Jackson; 24. New Orleans ; 25. Little Rock; 26. Detroit.

Territories.-27. Tallahasse ; 28. Madison City ; 29. Burlington ; 30. Astoria.

Islands.-Long Island, Staten, Martha's Vineyard, Nantucket ; Gouverneurs, Bedloe, and Ellis, in the Bay of New York.

Mountains.-Appalachian or Alleghany, Green, White, Blue, Cumberland, Ozark, Rocky.

Bays.-The Bays of Passamaquoddy, Penobscot, Casco, Massachusets, the Sound, New York, Delaware, Chesapeake; Currituck, Albemarle, and Pamlico Sounds ; the Bay of Appalachia and Mobile; Lake Michigan, (b.)

Rivers.-Mississippi, Ohio, St. Croix, Connecticut, Hudson, Delaware, Susquehanna, Potomac, Savannah ; Illinois, Missouri, Arkansas, Red River, Sabine ; Little Kenaway, Great Kenaway, Scioto, Little Miami, Great Miami, Kentucky, Green, Wabash, Cumberland, Tennesse; Fluvien or St. James, Roanoke, Pamlico, Cape Fear, Pedee and Santee ; Sabine, beween Lonisiana and Texas.
Addritonal Towns.-1. Portland, Bath, Hallowell, Brumewick, Waterville; 2. Portsmouth, Dover, Hanover, Exeter ; 3. Bennington, Burlington, Middlebury, Windsor ; 4. Salem, Plymouth (c), Worcester, Springfield, Northampton; 5. Newo
(b) Lake Michigan is 117 leagues long, 27 broad, and 333 in circumference; and is sufficiently deep to receive the largeet vessels.
(c) The first English settlement in New England was made at Plymouth, 22nd December, 1620, by 101 Puritans, who fled from England, on account of religious persecution. The anniversary of the landing of the Puritans is still observed.

## 24

London, Norwnch, Middletown, Litchfield, Withersfield; 6. Newport, Bristol, Pawtucket ; 7. New York, Brooklym, Troy, Hudson, Newburg. Schenectady, Utica, Syracuse, Geneva, Aubuin, Canandaigua, Rochester, Buffalo, Lockport ; 8. Philadelphia, Pittsburg, Lancaster; Alexandria, Georgetown), 9. New Brunswick, Newark, Princeton, Burlington, Elizabethtown, Patterson; 10. Wilmington; 11. Frederick, Hagerstown; 12. Nor'folk, Yorktown, Mount Vernon; 13. Newbern, Wilmington; 14. Charleston; 15. Savannah, Augusta; 16. Mobile, Blalcely; 17. Cincinnati ; 18. Vincennesg New Albany ; 19. Chicago, Alton; 20. Lexington, Louisville, Maysville ; 21. St. Louis; 22. Knoxville ; 23. Natcliez ; 24. Baton Rouge ; 25. Arkansas ; 26. Michili mackinack (d) ; 27. St. Augustine, Pensacola.

Natural Curiosities.-In New Hampshire is the Notch or Defile of the White Mountains; and a Rock, so poised on another, as to be moveable by the touch of the finger. In Vermont is a curious Stalactic Cave, in which, after a descent of 104 feet, there opens a Spacious Room about 20 feet in breadth, and 100 in length, with a'Circular ${ }^{i}$ Hall at the farther end, at the bottom of which boils up a deep spring of clear water. In New York are the Falls of Niagara; the Fall of the Mohawk River, near Albany; the mineral waters of Saratoga and Ballston. In New York State, a Rivulet runs under a hill about 70 yardsin diameter, forming a beautiful arch in the rock ; there is also a Stalactic Cave, in which was found the petrified skeleton of a large snake. In Virginia, the Natural Bridge over the River Cedar, in the County of Rockbridge ; this bridge is 90 feet long, and 60 broad, having a solid thickness of from 40 to 60 fect, it is raised 200 feet above the River over which it passes, its form is a regular arch, elegantly supported upon two pillars or butments, at the extremities; there is another bridge of this description in the County of Scott. In Virginia are also some Caverns, 300,400 , and even 900 feet in depth, resplendent with spars. In the Territory, on the N. W. of the Ohio, the Savannahs or Rich Plains, extend 30 or 40 miles without any tree. In North Carolina is Mount Ararat, or the Pilot Mountain. in the County of Stoke; it is a vast mutilated pyramid, several thousand feet in height ; above it is seen another which resembles a block, 300 feet high, the base of which is only 200 feet in diameter. In Kentucky, Tennesse, and Georgia, are subterraneous passages, several miles long, in which the aboriginal natives, as it would appear, deposited their dead, and from which is now taken a large quantity of Nitre, or Salt Petre.
(d) Pronounced Mack'e-naw.

## texas.

sfield ; 6. yn, Troy, Geneva, port ; 8. Georgeurlington, Fredevick, non; 13. Savannah, 18. Vinexington, ille ; 23 . - Michili
tch or De$n$ another, nont is a feet, there hd 100 in bottom of ork are the Albany; Tew York eter, form:Cave in In Vir. County of having a above the elegantly es ; there cott. In 0 feet in e N. W. 40 miles $x t$, or the mutilated 1 another $h$ is only Georgia, hich the lead, and ; or Salt

Boundaries.--N. and E. United Staten; S. Gulf of Mexico ; W. Mexico.

Chief Towns,-Austin, Houston, Galveston.
The Sabine River forms the boundary between Texas and Lousiana.

## MEXICO.

Boundariks.-N. United States; E. Texas, and Gulf of Mexico ; S. Guatimala ; W. Pacific Ocean.
Ceief Towns.-Mexico, Guanaxuata, Puebla, Zacatecas, Vera Cruz, Acapulca. Belize is the chief town of the British settlement of Belize in the Bay of Honduras.

## GUATIMALA.

Boundaries.-N. Mexico; E. Caribbean Sea; S. Isthmus of Darien ; W. Pacific Ocean.

Chief Towns.-St.Salvador, Cartago, Leon, Truxillo, Omoa.

The principal Lake is Nicaragua.



#### Abstract

- Nateral Curiosipres.-Besides Volcanoes there are many Natural Curiosities in Mexico, one of the most remarkable being the Ponte de Dios, or Bridge of God, resembling the - natural bridge in the United States; it is about 100 miles S. E. of Mexico, over a deep river, and is passed as a highway. The other chief curiosities are, M.Mountain or EFill of Loadilones, and the famous Ahahueta, or Cypress, which is 73 feet in circumferesce.


## RUSSIAN TERRITORY.

Boundaries.-N.N. Northern Ocean; E. Britislt Possessions ; S. Pacific Ocean ; W. Behring's Straits.

Chief Town.-New Arciangel, in tho Island and on the Straits of Sitka, on the N. W. coast. The principal Islands are the Aleutian and Fox Islands.

## WEST INDIAN ISLANDS.

The Greater Antilles.- 1 . Cuba; 2. 2 Hayti or St. Domingo; 3. Jamaica; 4. Porto Rico.

Towns.-1. Havannah; 2. Yort Republican of Port Henry (Port-au-Prince) ; 3. Kingston, St. Jago or Spanish Town, Savanna-la-Mar; 4. St. Juan-of-Porto-Rico.

The Lesiser Antilees.-Trinidad, Sania Margueritta, Curaçoa.

The Leeward Iseands.*-Anguilla, St. Martins, Saba, St. Eustatius, St. Bartholomew, St. Christopher's or St. Kitt's, Barbuda, Antigua, Mont Serrat, Nevis, Guadaloupe; La Desirade, Mario Galante, Dorninica.

The Windward 1slands.--Martinico, St. Lucia, St. Vincent, Grenadn, Barbadoes, Tobago.

The Virgin lsiands-E. of wedorto Rico, are St. Thomas, St. John, Santa Cruz, Tortola, Virgini Gorda, Anegada.

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## SOUTH AMERICA.

British ring's

## EUROPE.

Boundaries.-N: Northern Ocean; F. Asia, Black Sen, Sea of Marmora, Archipelago; S. Mediterranean ; W. Atlantic.

[^1]Countries.-l. England (a); 2. Scotland (b); 3. Ireland (c) ; 4. France (d) ; 5. Spain (e) ; 6. Portugal ( $f$ ); 7. Switzerland ( $g$ ); 8. Italy ( $h$ ); 9. Germany ( $i$; ; 10: Holland ( $k$ ); 11. Belgium ( $l$ ); 12. Denmark ( $m$ ); 13. Norway ( $n$ ) ; 14. Sweden (o) ; 15. Russia (p) ; 16. Austria (q) ; 17. Prussia $(r)$; 18. Turkey $(s) ; 19$. Greece $(t)$.

Capitals.-1. London; 2. Edinburgh ; 3. Dublin; 4. Paris; 5. Madrid; 6. Lisborn ; 7. Berne; 8. Rome; 9. Frankfort, on the Mayne; 10. Amsterdam ; 11. Brussels ; 12. Copenhagen; 13. Christiana; 14. Stockholm ; 15. St. Petersburg; 16. Vienna; 17. Berlin; 18. Coustantinople; 19. Athens.

Islands.-Great Britain, Ireland, Iceland, Spitzbergen, Nova Zembla, Zealand, Funen, Candia, Sicily, Malta, Corsica, Sardinia, Majorca, Minorca, Ivica.

Mountains.-Alps, Apennines, Pyrenees, Hae. mus or Balkan, Carpathiaus, Kolen, Ural.

Seas, Gulfs, \&c.-Mediterranean Sea; Gulfs of Lyons, Genoa, Venice ; Archipelago, Levant ; Black Sea ; Seas of Marmora, Asoph; Bay of Biscay, English Channel, German Ocean or N. Sea or British Ocean, St. George's Channel, Irish Sea, N. Channel ; Baltic Sea ; Gulfs of Bothnia, Finland, Riga or Livonia; Skager Rack, Cattegat, White Sea.

Straits.-Gibraltar, Bonifacio, Messina, Dardanelles, Constantinople, Caffa, Dover ; the Sound, Great Belt, and Little Belt, in Denmark.

Rivers-Wolga, Danube, Rhine, Rhone, Elbe, Po, Loire, Ebro, Tagus.

## (a) ENGLAND.

Boundaries.-N. Scotland ; E. German Ocean; S. Euglish Channel ; W. St. George's Channel, Irish Sei.

Principal Towns.-London, Liverpool, Newcastle, Durham, Hull, York, Canterbury, Bath, Bristol, Manchester, Sheffield, Leeds, Derby, Nottingham, Shrewsbury, Woreester, Warwick, Northampton, Huntingdon, Cambridge, Cloucester, Oxford, Windsor, Dover, Brighton, Portsmouth, Weymouth, Sidmouth, Exeter, Salisbury, Plymouth, 'Truro, Falmouth, Penzance.
Counties.-1. Northumberland; 2. Durilam; 3. York; 4. Lincoln ; 5. Norfolk; 6. Suffolk; 7. Essex ; 8. Cumberland ; 9. Westmoreland; 10. Lancashire ; 11. Cheshire; 12. Shropshire ; 13. Hereford ; 14. Monmouth; 15. Derby; 16. Nottingham; 17. Stafford; 18. Leicester; 19. Rutland; 20. Worcester ; 21. Warwick; 22. Northampton; 23. Iuntingdon; 24. Cambridge; 25. Gloucester; 26. Oxford; 27. Buckingham; 28. Middlesex ; 29. Herlford; 30. Bedforl; 31. Somerset; 32. Wiltshive; 33. Berleshire; 34. Survey; 35. Kent ; 36. Sussex ; 37. Hampshire; 38. Dorset ; 39. Devon; 40. Cornwall.

Towns.-1. Newcastle, Berwick, Morpeth, Alnuick; 2. Darham, Sunderland, Stockton; 3. Yorl, Lecds, Sheffield, IIull, Scarborough, Whitby ; 4. Lincoln, Gainsborough, Boston, Stamford; 5. Norwich, Yarmouth; 6. Ipswich ; 7. Clelnsford, Colchester, Harwich ; 8. Carlisle, Penrith, Whitelaven, Workington ; 9. Appleby, Kendal; 10. Lancasler, Liverpool, Manchester, Prcston ; 11. Chestcr, Stockport; 12. Shreushury, Bridgenorth; 13. Hereforl ; 14. Monmouth, Chepstow ; 15." Derby, Clesterfield; 16. Nottingham, Newarth; 17. Stafford, Litchfield, Burton; 18. Leicester, Harborough, Bosworth ; 19. Oakham, Uppingham; 20. Worcester, Evesham, Droituich; 21. Warwick, Coventry, Birmingham, Startforl-upon-Avon; 2i. Northampton, Peterborough, Daventry ; 23. Huntingdon, St. Neots, St. Ives; 24. Cumbridge, E'ly, Newmarket ; 25. Gloucester, I'twhes-
bury, part of Bristol; 26. Oxford, Woodstock, Banbury ; 27. Buckingham, Eton; 28. London, Westminister, Brentford ; 29. Hartford, Ware ; 30. Bedford, Biggleswade ; 31. Bath, Wells, part of Bristol; 32. Salisbury, Wilton; 33. Reading, Windsor ; 34. Guildford, Kingston, Southwark; 35. Maidstone, Canterbury, Rochester, Chatham, Dover, Sandwich ; 36. Chichester, Brighton, Seaford, Hastings ; 37. Winchester, Southampton, Portsmouth ; 38. Dorchester, Weymouth, 39. Exeter, Plymouth, Davtmouth, 40. Launceston, I'ruro, Falmouth, Penzance.

1slands.-Isle of Man, in which are Castleton, Douglas, Ransay, Peel ; Isle of Anglesea; Lundy Isle ; Scilly Isles, principal St. Mary's ; Isle of Wight, in which are Newport, Cowes; Sheppey, Thanet; Holy Island or Lindisferne; Coquet. On the Coast of France are Jersey, in which is St. Helier ; Guernsey, in which is St. Pierre ; Alderney ; Sark.

Mountains.-The Cheviot Hills, on the borders of Scotland ; in 3, Bowfell, Whernside, Ingleborough, Pennygent ; 8, Skiddaw, Crossfell ; 12, Wiekin ; 15, the Peak ; 20, Malvern ; 24, Gogmagog ; 25, Cotswold; 31. Mendip.

Lakes.-8, Derwent-vjater or the Lake of Keswick; between 8 and 9, Ulles -water; between 9 and 10, Winander or Winder-mere; in 23, Wittlesea-mere.

Capes.-Flamborough Head, Spurn Head,N. Foreland, S. Foreland, Dungeness, Beachy Head, the Needles, St. AL ban's Head,' Portland Point, Start Point, Eddystone Light house, Lizard Point, Land's End.

Bays.-Robin Hood's Bay, Bridlington Bay, Humber Mouth, the Wash, Yarmouth Roads, the Downs, Goodwin Sands, Straits of Dover, Spithead, Torbay, Mounts Bay, Bristol Channel, Milford Haven, St. Bride's Bay, Cardigan Bay, Morecambe Bay, Solway Frith.

Rivers.-Thames, Great Ouse, Severn, 1'rent, Mersoy, Yorkshire Ouse, Tyne.

## WALES.

Counties.-1. Anglesea; 2. Caernarvon; 3. Denbigh; 4. Flint ; 5. Merioneth; 6. Montgomery; 7. Cardigan ; 8. Pembroike; 9. Caermartlien; 10. Glamorgan; 11. Brecknock; 12, Radnor.

Banbury ; $r$, Brentvade ; 31. lton; 33. uthwark; n, Dover, ings ; 37. orchester, 10. Laun-

Douglas, :illy Isles, Newport, udisferne ; hich is St. $y$; Sark. of Scotnnygent ; 20, Mal$p$.
Keswick ; Winander

Foreland, St. AL one Light

Humber Goodwin nts Bay, Cardigan
, Mersel,
abigh ; 4. gan ; 8 Breck-

Towns.-1. Beaumaris, Holyhead; 2. Caernarvon, Bargor, Conway; 3. Denbigh, Wiexham, Ruthin; 4. Flint, St. Asaph ; 5. Harleigh, Bala ; 6. Montgomery, Welchpool ; 7. Cardigan, Aberystwith ; 8. Pembroke, St. David's, Haverfordwest ; 9. Caermarthan, Kidwelly ; 10. Cardiff, Llandaf, Swansea; 11. Brecknock, Builth; 12. New Radnor, Presteign, Knighton.

IsLands.-Skerry or the Isle of Seals, Bardsey, Ramsey.
Mountains.-In 2, Snowdon; 5. Berwyn, Cader Idris ; 6. Plinlimmon; 11. Van or Brecknock Beacon.

Capes.-Great Ormes Head, Strumble Head, St. Dueid's Head, Gowen's Point, Worm's Head.

Rivers.-Dee, Clwyd, Severn, Wye.

## (b) SCOTLAND.

Boundaries.-N. Northern Ocean; E. German Ocean; S. England and the lrish Sea; W. Atlantic.

Principal Towns.--Edinburgh, Glasgow, lnverness, Aberdeen, Forfar, Montrose, Cupar, Dunkeld, Perth, Dundee, Kinross, Kirkcaldy, Dunfermline, Alloa, Stirling, Falkirk, Inverary, Camphellton, Dumbarton, Greenock, Port Glasgow, Paisley, Ayr, Kilmarnock, Stranraer, Kirkcudbright, Dumfries, Annan, Moffat, Lanark, Hamilton, Peebles, Selkirk, Linlithgow, Leith, Porto Bello, Musselburgh, Dalkeith, Haddington, IJunbar, N. Berwick, Dunse, Coldstream, Lander, Kelso, Jedburgh, Hawick.

Counties.-1. Caithness; 2. Sutherland ; 3. Ross; 4. Imerness ; 5. Argyle ; 6. Cromarty; 7 Nairn ; 8. Elgin or Moray ; 9. Banff ; 10. Aberdeen; 11. Mearns or Kincardine ; 12. Forfar or Angus ; 13. Fife; 14. Kinross ; 15. Clackmannan; 16. Perth ; 17. Dumbarton or Lennox: 18. StirHing ; 19. Linlithgow or W. Lothian; 20. Edinburgh or Mid

Lothian ; 21. Haddington or E. Lothian ; 22. Berwick or Merse 23. Roxburgh or Teviotdale; 24. Dumfries; 25. Kirkcudbright or E. G'alloway; 26. Wigton or W. Galloways 27. Ayr ; 23. Renfrew; 24. Lanaric or Clydesdale; 30. Peebles or T'weeddale; 31. Sellirik; 32. Bute and Ayran; 33. Orleney and Shelland.

Towns.-1. Wick, Thurso ; 2. Dornoch ; 3. Dingwall, Tain, Fortrose ; 4. Inverness, Fort George, Fort Augustus, Fort William ; 5. Inverary, Campbellton; 6. Cromarly; 7. Nairn; 8. Elgin, Forres, Fochabers; 9 Banff, Cullen; 10. New Aberdeen, Old Aberdeen, Petcrhead, Fraserburgh; 11. Bervie, Stonehaven; 12. Dundee, Forfar, Montrose; 13. St. Andrews, Cupar, Danfermline, Falkland, Kinghorn, Kirle caldy ; 14. Kinross; 15. Clackmannan, Alloa; 16. Perth, Scone, Dunkeld, Crieff, Dumblane; 17. Dumbarton; 18. Stirling, Falkirk; 19. Linlithow, Borrowstonness or Eo'ness, S. Queen's Ferry; 20. Edinburgh, Leith, Porto Bello, Musselburgh, Dalkeith; 21. Haddington, Dunbar, N. Berwick; 22. Grealaw, Dunse, Coldstream, Lauder ; 23. Jedburgh, Kelso, Hawicle Melrose ; 24. Dumfries, Annan, Moffat, Sanquhar ; 25. Kirllcurdbright, New Galloway, Castle Douglas ; 26. Wigton, Whitchorn, Stranracr, Port Patrick; 27. Ayr, Irvine, Kilmarnock ; 28. Renfrew, Port Glasgow, Grecnock, Paisley; 29. Lanark, Hamilton, Glasgow; 30. Peebles ; 31. Sellivik, Galashiels; 32. Rothsay ; Brodurck, Lamlash; 33. Kirkwall, Stromness ; Lervick, Scalloway.

1slands.-Orkney Islands or the Orcades, princtpal MainLand or Pomona, Hoy; Shetland Islands, principal Mainland, Yell ; Western Islands or the Hebrides, principal Lewis, Harris, Sky, Mull, Jura, Isla, Iona or Icolmkill.

Mountains.-In 3, Ben Wyris; 4. Ben Nevis, Cairngorm, Corriarok ; 5. Ben Cruachan; 11. Mount Batlock ; 16. Grampian and Ochill hills, Shehallion. Ben Lawers, Ben More Ben Voirlich, Ben Ledi; 18. Ben Lomond; 20. Pentland Hills; 21. N. Berwich Law ; between 21. and 22. Lommermuir Hills; in the S. of 23. Cheviot Hills; in the N. of Dumfrics, Moffat and Lead Hills ; in 29. 1into.

Laakes.-In 2. Shin; 3. Maree, Broonl ; 4. Ness, Lochy Linnhe ; 5. Etive, Awe, Fync, Long ; 14. Leven; 16. Tay, Rannoch, Ericht, Ketterin, Erne; 17. Lomond ; 26. Ryan.

Bays and Friths.-Friths of Forth, Tay, Murray, Cromaorty, Dornoch, Pentland, Clyde, Soluay; Bays of Wigton and Glenluce ; the Sounds of Mrull, Jura, Isla; the Whistpool of Corryvrel an, the Minch.
erwick or ies; 25. Falloways tale; 30. ran; 33. Dingwall, 4ugustus, parly ; 7. llen; 10. hrgh; 11. rose ; 13. prn, Kirle 16. Perth, lon ; 18. s or $E{ }^{\circ}$ ' brto Bello, N. Ber23. Jednan, Mofcy, Castle latrick; Glasgow, gow ; 30. Broduick, lloway. pal MaivMainland, wis, Har-
airagorm, ock; 16. Ben Mors Pentland 22. Lom the N. of
ss, Lochy, 16. Tay, ;. Ry ${ }^{2}$ n. ray, CroWigton he Wharl-

## (c) IRELAND.

Boundaries.-N. Atlantic; E Irish Sea, and St. George's Channel ; S. and W. Atlantic.

Principal Towns.-Dublin, Cork, Wicklow, Wexford, Kilkenney, Waterford, Kinsale, Limerick, Sligo, Donegal, Londonderry, Coleraine, Antrim, Belfast, Carrickfergus, Newry.

Provinces.-Leinster, Ulster, Munster, Connaught.
Counties in Leinster, 1. Louth; 2. E. Meath; 3. Dublin ; 4. Wicklow ; 5. Wexford ; 6. Longford; 7. W. Meath ; 8. King's County ; 9. Queen's County; 10. Kullsenny ; 11. Kildare; 12. Carlow.

Counties in Ulster.-1. Down; 2. Antrim; 3. Londonderry ; 4. Donegal; 5. Fermanagh; 6. Cavan ; 7. Monaghan; 8. Arnagh ; 9. Tyrone.

Counties in Munster.-1. Clare; 2. Kerry; 3. Cork; 4. Waterford ; 5. Tipperary; 6. Limericl.

Counties in Connaughit-1. Leitrim; 2. Sligo; 3. Mayo ; 4. Galway ; 5. Roscommon.

Towns in Leinster.-1. Drogheda, Dundalk, Carlingford; 2. Tirim, Navan; 3. Dublin, Swords, Newcastle; 4. Wicklov, Arklow ; 5. Wexford, Enniscorthy, Ferns ; 6. Longford, Lanesborough ; 7. Mulingar, Athlone; 8. Philipstown; 9. Maryborough ; 10. Kilkenny ; 11. Kildare; 12. Carlow ${ }_{2}$ Old Leighlin.
Towns in Ulster.-1. Downpatricl, Newry, Dromore; 2. Antrim, Belfast, Carrickfergus; 3. Londonderry, Coloraine ; 4. Donegal ; Ballyshannon ; 5. Enniskillen ; 6. Cavan, Kilmore; 7. Monaghan ; 8. Armagh ; 9. Dungannon.

Towns in Munster.-1. Clare, Ennis; 2. Tralee, Dingle; 3. Cork, Kinsale, Youghall; 4. Waterford; 5. Tipperary; 6. Limerick.

Towns in Connaught.-1. Leilrim; 2. Sligo; 3. Castlobar. ; 4. Galway, Tuam; 5. Roscommon, Elphin.

Is.ands.--Ritithlin, Copeland, Clare, S. Isles of Arran, Achill, N. Isles of Arran, Tory.
Lakes.--Neagh, Erne,' Allen, Conn, Mask, Corrib, Ree, Killarney, the Devil's Punch Bowl.

Bays.-Carriclefergus, Strang.ford, Carlingford, Dundalh, Dunmanus, Bantry, Kenmare River, Dingle, Galway, Clew, Sligo, Donegal, Loughs Swilly and Foyle.

Capes.-Fair Head, Howth Head, Carnsore Point, Capo Pear, Mizzen Head, Loop Head, Slyne Head, Urris Head, Malin Head.
Rivers.-Shannon, Barrow, Boine, Liffey, Slaney, Blackwater, Lee, Bandon, Ban, Lagan Water.
(d) FRANCE.

Principal 'Towns.-Paris, Versailles, st. Cloud, Fontainbleau, Ronen, Havre, Dieppe, Boulogne, Calais, Dunkirk, Lille, Amiens, Rheims, Caen, Brest, Nantes, Rochelle, Bordeaux, Bayonne, Toulouse, Montpellier, Marseilles, Grenoble, Lyons, Strasbourg, Metz, Órleans, Tours, Angers. Islands.-Uchant, Belleisle, Noirmontier, Rhe, Oloron, Hieres, Corsica, in which are Bastia, Ajaccio, Calvi.

Mountarns.-Pyrences, Alps, Jura, Vosges, Cevennes, Puy de Dome, Cantal.

Rivers.-Seine, Loire, Rhone, Garonne.
(e) SPAIN.

Principal Towns.-Madrid, Toledo, Talavera, Badajos, Seville, Cadiz, Trafulgar, Gibraltar, Malaga, Granada, Murcia, Carthagena, Valencia,
; 3. Castlo n. s of Arran, Corrib, Ree, rd, Dundalts, alway, Cleıs,

Point, Caps Urris Hearl,
laney, Black-
sailles, St. 3, Dieppo, as, Rheims, 5, Bayonne, Grenoble, rs, Angers. utier, Rhe, are Bastia,
rin, Vosges, nne.
, Talavera, Gibraltar, Valencia,

Alicant, Barcelona, T'ortosa, Saragnssa, Pampeluna, Bilboa, Vittoria, St. Sebastian, Fontarabia, Oviedo, Santiliana, Santander, St. Jago de Compostella, Vigo, Corrunna, Ferrol, Leon; Astorga, Salamanca, Ciudad Rodrigo; Burgos, Valladolid.

Mountains,-Pyrenees; Sierra de las Asturias, Urbia or Guadarama, Toledo, Morena, Nevada, Blanca, Rock of Gibraltar, Montserrat.

Capes.-Finisterre, Ortegal, Europa Point. Rivers.-Minho, Douro, 'Tagus, Guadiana, Gaadalquiver, Ebro.

## (f) PORTUGAL.

Principal Towns.-Lisbon, Oporto, Brag. nnza, Coimbra; St. Ubes, Cintra, Vimiera, Torres Vedras.

Capes. - Rock of Lisbon, D'Espichel, St. Vincent, St. Mary.

## (g) SWITZERLAND.

Principal Towns.-Berne, Basle, Geneva, St. Gall.

Mountains.-Alps, (including the Rhaetian, in the S. E. ; and the Helvetian, in the S. W.)

Lakes.-Geneva, Constance or Boden Sea.
Rivers,-Rhine, Rhome.
(h) ITALY.

Principal Towns-Rome, Naples, Florence, Genoa, Turin, Perugia, Loretto, Capua, Brindisi, Otranto, Tarento, Reggio, Maida ; Palermo, Messina, Catania, Augusta, Syracuse, in Sici!y ;-Cag. liari, Sassari, in Sardinia ;-Valetta, in Malta.

Mountains.-Alps, Apennines; Mounts Vesuvius, Attua.

Gulfs and Straits.-Venice, Naples, Genoa; Straits of Messina, Bonifacio.

Capes.--Spartivento, Passaro.
Rivers.-Po, Tiber.
(i) GERMANY.

Principal Towns.--Hanover, Brunswick, Bremen, Hamburgh, Dresden, Stuttgard, Munich, Weimar, Frankfort on the Mayne, Baden, Constance, Ratisbon, Landshut, Mentz or Mayence, Coburg.
Rivers.-Rhiné, Danube, Elbe, Weser.

## (k) HOLLAND.

Principal Towns.-Amsterdam, Roterdam, the Hague, Utrecht, Leewarden, Groningen.

## (l) BELGIUM.

Principal Towns.-Brussels, Antwerp Ghent, Ostend, Mons, Iiege, Waterloo.

Rivers.-Scheldt or Escaut, Maese or Meuse.

Florence, Brindisi, mo, Mes-;-Cag. ralta. ints Ves-

## (m) DENMARK.

Principal 'Jowns.-Copenhagen, Elsinote, Aalborg, Viborg, Sieswick, Kicl, Alto. , Glucks. tadt.

Islands.-Iceland, in which is Mount Hecla, Principal Town, Skalholt ; Ferro Islands, Greenland.

Sounds.-The Skaw, the Sound, Great Belt, Little Belt.

## ( $n$ ) NORWAY.

Principal 'Jowns.-Christiana, Frederickshall, Christiansand, Arendal, Kongsberg, Bergen, Drontheim, Wardhus, Waranger.
lslands.-Mageroe, Loffoden, Waeroe, Hitteren, Bommel.

Mountains.-Langfiall, Dofrafiall, Koleia.
Bays and Capes.-N. Cape, W. Fiord, Maelstrom, Naze or Lindenaês.

Rivers.-Glomme, Dramme, Tana.

## (o) SWEDEN.

Principal Towns.-Gottenburg, Christianstadt, Carlscrona, Kalmar, Malmo, Norkoping, Stockнolm, Upsal, Geffle, Fahlun or Copper. berg, Nykoping, 'Iornea, Unea, Pitea.

1slands.-Gothland, Oland.
Lakes. - Wener, Wetter, Maeler.
Rivers.-Gotha, Motala, Dahl, Tornea.

## (p) RUSSIA.

Prikcipal 'Towns.-Str. Petersburg, Cronstadt, Revel, Riga, Olonetz, Archangel, Onegn, Koli, Wologda, Novogorod, Perm, Moscow, Sinolensk, Orel, Kiew, Voronetz, Poltova, Ekaterinoslav, Cherson, Oczakow, Odessa, Perekop, Caffia or 'Theodosin, Simpheropol, Sevastopol, Azof;-Abo, Helsingfors, Ulea ;-Mittau, Liban, Windan, Wilna, Warsaw, Praga, Pultusk, Lublin, Cracow;-Bender, Belgorod or Akerman, Ismail, Kishenau.

Istands.-Aland, Dago, Oesel, Kolguef, Way. gats, Nova Zembla, Spitzbergen.

Mountanss - Olonetz, Valdai, 'Maurida, Ural.
Seas, Gulfs, and Straits.-Gulis of Bothnia, Finland, Riga; White Sea, Sea of Azof; Straits of Caffa or Enikale ; Waygats Straits.

Ruvers.-Wolga, Don, Dneiper, Bog, Dncister, Vistula, Memel or Niemen, W. Dwina, Onega, N. Dwina, Pruth, Danube.

## (q) AUSTRIA.

Principal Towns.-Vienna, Laybach, 'Tifieste, Inspruck, Trent, Presburg, Buda, Pest, 'Toliay, Temeswar, Peterwardein ;-Prague; Olmuzz; Leopold; Ragusa, Cataro ;-Venice, Padua, Verona, Belluno ; Milan, Lodi, Como, Mantua.

Mountains.-Carpathian, Lhactian Alps or Brenner Monntains.

Revers.-Wamube, Elbe.

## (r) PRUSSIA.

Croll. Onega, oscow, Ekaprekop, stopol, Libau, ublin, Ismail,

Ural. bthnia, raits of

Princiral Towns.-Konigsberg, Memel, Tilsit, Dantzig, 'Thorn, Stettin, Colberg, Berlin, Frankfort on the Oder, Breslau, Glogan, Magdeburg, Munster, Minden, Cologne, Coblentz, Aix la Chapelle.

## (s) TURKEY IN EUROPE.

Principai Towns.-Jassy, Belgrade, Constantinople, Adrianople, Nicopoli, Saloniki, Larissa, Volo, Durazzo, Arta.

Islands.-Cerigo, Zante, Cephalonia, Teaki, Santa Maura, Paxo, Corfu, ceded to Britain, 5th November, 1815 , under the denomination of the " United States of the Ionian Islands."

Mountans.-Haêmus or Balkan ; Athos, Olympus, Ossi, Pelion, Pindus, in the S.

Rivers.-Danube, Marizza, Vardar.

## ( $t$ ) GREECE.

Principal Towns.-Athens, Tripolizza, Coron, Argos, Corinth, Thebes.

Mountans.--Parnassus and Helicon, in the N.; Mainote or Taygetus, in the S.

Capes.-Modon, Matapan, Malio or St. Angelo.
AntiQuitifs.-The seven Wonders of the World were-1. The Colossus at Rhodes, a Statue of the S'un, 70 cubits high, placed across the mouth of the harbour. A man could not grasp its thumb with both his arms. Its legs wero stretched out to such a distance, that a large ship under sail might easily enter the port between them. lis construction occupied 12 years, and cost 300 :
 50 years, and at lust was thrown down by an rarthquake. U. The I'emple of Diance, at E:phesus, was a work of the greatest magnificence ; $\mathbf{2 2 0}$ years were spent in finishing it, though all Asia was employed. It was supported hy $1: 27$ lifars, raised hy as many Kings, and each 60 fect ligh. Uf herse columns 37 were engraven. 'Tho Image of the Cioldess was made of Ebbony. 3. I'he Mausoleum or Sepulchro of Mutusolns, King of (; ria, built by his Queen, Artemisia, of the purest marble; and yet the workmanship of it was much moie viluabie then the materials. It was, from N. tu S. 63 teet long, ahacst 111 fect in compess, and 0.5 cubits (that is about $\$ 5$ teet) high, sumponded by $\ddot{0}$ ce clumms, beatitul in the highest degrec. 4. An Ivery Statue of Jupiter, in the 'l'emp. le of the City Olympia, carved with lle erreatest art 1 y Phidias, and of a prodigious siza. 5. The Wails of Brabylon, (ihe metropolis of Chatelea) erectad by Queen semiramis. Their eiremmeroneo was 60 miles, their height S00 feat, and their headth 50 teat ; so that six chariots atread might convenicnty pass upon them. 6 . 'l'he Pyramids of Egypi, the dirst of which is constricted of ereat stones, the least of which is 30 feet in length; 360,0 ou men wero employed in building it lir the space of do years. 7. The Royab Palace of Cyrus, King of the Medes, made liy Menon, with no lese prodigality than art ; for he cemented tho sones with gold.

ASIA.
Boundaries.-N. Northern Ocean; E. Pacific ; S. Indian; W. Europe, Black-Sea, Archipelago, L،evant, Isthmns of Suez, and Ried Sea.

Divisions.-Tarkey in Asia, (a) ; 2. Arabia; 3. Persia; 4. Hindostan, (b) ; 5. Eiastern Peninsula, (c); 6. China, (d); 7. 'libet; S. Eastern or Chinese Tartary; 9. Liussian 'Tartary or Siberia, (e); 10. Western or Independent Tartary, ( $f$.)

Capitals.-1. Aleppo; 2. Mecca; 3. Teheran; 4. Calcutta; 5. Ava; 6. Pekin; 7. Lassa; 8. Sagalien Oula Hotun ; 9. 'T'obolsk ; 10. Bokhara.

Islands.-Cyprus, Ceylon, Sumatra, Java, Borneo, Celebes, Philippire, Japan, New Guinea, Sustralia (g), Van Dieman's Land New Zealand.

Mount Taurns, and Hore
Seasa of Bengal Nankin; Sea of 0 Sea of A
Strait da, Behri

Rivers ku, Gang

Divisio
Caraman Canaan, or Alge: Armenia

Towns gora, 'To mascus, 'l'arabolt Tyre, Pt lis or B Jericho ; Mosul, Babylon 6. T'rebi

Moun Ararat.

LiAKE
River

Mountains.-Uralian, Altaian, Cancasus, Ararat, Taurus, Lebanon, Himmaleh;-Mounts Sinai, and Horeb.

Seas and Gulfs.-Red Sea, Arabian Sea, Bay of Bengal; Gulfs of Siam and Tonquin ; Bay of Nankin; Whanghay or Yellow Sen, Guif of Corea, Sea of Ochotsk, Sea of Kamtschatka, Caspian Sea, Sea of Aral, Persian Gulf.

Straits.-Babelmandeb, Ormus, Malacca, Sunda, Behring.

Rivers.-Ob or Oby, Yenisei, Hoang-ho, Kian. ku, Ganges, Indus, Etiphrates, T'igris.

## (a) TURKEY IN ASIA.

Divisions.-1. Asia Minor, (including Anatolia, Caramania, and Roum) ; 2. Syria, (including Canaan, Palestine or the Holy Land); 3. Diarbeck or Algezira; 4. Irak-Arabi ; 5. Curdistan; 6. Armenia or 'l'urcomania.

Towns.-Smyrna, Aiosoluc or Ephesus, Angora, Tocat ; 2. Aleppo, Antioch, Damas or Damascus, Jerusalem, Alexandretta or Scandaroon, 'T'arabolus or Tripoli, Sayde or Sidon, Sur or T'yre, Ptolemais or Acre, Joppa or Jaffa, Heliopolis or Balbec, Tadmor or Palmyra (in ruins), Jericho; 3. Diarbeck or Diarbekr, Ninêveh or Mosul, Anah; 4. Bagdad, Bassora, Hillah or Babylon ; 5. Betlis or Bedlis, Van, Irbil or Arbela; ©. Trebisonde, Eirzeroum.
Mountains.-Taurus, Olympus, Ida, Lebanon, Ararat.

Luakes-CUlubad, Sen of Galilee, Dead Sen, Van. Rivers.-Orontes, Jordan, Euphrates, Tigris.

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## (3) HINDOSTAN.

Divisions.-1. Gangetic ; 2. Sindetic ; 3. Central ; 4. Southern Hindostan.

Towns.-1. Calcutta, Moorshedabid, Patna, Allahabad, Lucknon, Agra, Delhi; 2. Kuttore, Cashmere, Lahore, Moultan; 3. Ahmedabad, Cambay, Surat, Visagapatam, Juggernaut, Hydrabad, Golconda, Masulipatam, Goa, Bombay ; 4. Seringapatam, Arcot, Madras, Pondicherry.

Islands.-Ceylon, Maldives, Laccadives, Andaman Isles. In Cey!on are Candy, Columbo, 'I'rincomalé.

Mountains.-Himmalaya, Fastern and Western Ghauts.

Gulfs.-Gulfs of Cutch and Cambay; Cape Comorin; Gulf of Manara, $\Lambda$ Adam's Bridge, Palk's Passage, Bay of Bengal.
livers.-Ganges, Indus, Burhampooter or Brahmapootra.

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## (c) EASTERN PENINSULA.

Invisions,-1. The Birman Empire; 2. Malaye or Malacca, \&c.

Principal Towns.-1: Ava, Ummerapoorn, Prome; Pegu, Rangoon, Sirian, Martaban; 2. Miliacca, Queda, Ligor, Singapore.

Riverss_Irrawady, Thaluan, Meinam, Maykaung.

## (d) CHINA.

Principal Towns.-Perin, Nankin, Cantol!,
3. Cen-

Patna, Kuttore, ad, Camydrabad, . Sering-
es, AnJolumbo,

1d Wes-
Cape
e, Palk's
ooter or
; 2. Marapoorn; ban ; 2.
m, May- Singan.

Islands.-Hainan, Formoso, Loo Choo, Tchusan, Macao, S. of Canton.

Rivers.-Hoang-ho or Yellow River, Kian-ku or Blue River, Choo-kiang or River of Canton.

## (e) RUSSIAN TARTARY or SIBERIA.

Divisions.-1. Caucastis, (including Georgia, Circassia, \&c.) ; 2. Astracan ; 3. Orenberg ; 4. Tobolsk; 5. Irkutsk.

Principal Towns.-1. Teflis, Derbend, Baku, Erivan; 2. Astracan ; 3. Oufa, Orenberg ; 4. Tobolsk, Catharinburg, Tomsk, Kolivan ; 5. Irkutsk, Kiachta, Nertchinsk, Omsk, Yakutsk, Ok. hotsk.

Mountains.-Caucasus, Uralian, Altaian.
Ruvers.-Ural, Ob or Oby, Yenisei, Lena.

## (f) WESTERN or INDEPENDENT TARTARY.

Divisions.-1. Kharism; 2. Great Bucharia. Principal Towns.-1. Khiva, Urghenz; 2. Samarcand, Bokhara, Balk, Khojund.
Mountains.-Gaur, Belur Tag.

## (g) AUSTRALASIA.

1: New S. Wales, and Now Holland;-in New S. Wales are Botany Bay, Port Jạckson, Sydney ;
2. Van Diemen's Land, in which are Hobart 'Town, Port Dalrymple;-3. Lord Howe's and Norfolk's Islands;-4. Papua or New Guinea; 5. New Britain, New Ireland, Solomon Isles; 6. New Hebrides; 7. New Caledonia; 8. New Zealand.

## POLYNESIA.

1. Pelew Islands; 2. Ladrone or Marian Isles ; 3. Lot's Wife ; 4. 'The Carolines ; 5. The Sandwich Isles, principal Owhyhee; 6. The Marquesas; 7. The Society lsles, principal Otaheité, Ulitea; 8. Friendly Isles; 9. Feegee Isles; 10. Islands of Navigators.

Antiquitres.-The Antiquities of Asiatic Turkey, once tho chosen seat of the Arts, are numerous and imporiant. The most splendid ruins are those of Palmyra or Tadmor, in the Desert. The most remarkable relic of Balbec, the ancirnt JIeliopolis, is a I'cmple, supposed to have been dedicated to the Sun. Recent investigation has disclosed another scene of antiquity, in the sire and celelrated plain of Troy, towards the mouth of the Hellespont. In Analolia or Asia Minor, were the Seren Churches of Asia, mentioned in the Eook of Revelatirn, viz:-I Pergamos, Laodicєa, Philadelphia, Thyatira, Sardis, Efhesus, and Smyrna; but these places, except Smyrna, are mostiy in ruins. In Syria were Palestine or the Holy Land, Canaan, Judea, Gatilce, IManicia, \&c. Irák Arabi was formerly called Chaldea and Pada* naram.

## AFRICA.

Boundaries.-N. Mediterranean; E. Isthmus of Suez, Red Sea, Indian Ocean ; S. Southern; W. Atlantic.

Divisions_-1. Egypt, (a); 2. Nubia, (b); 3. Abyssinia, (c); 4. Barbary, (including Morocco and

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 Norfolk's 5. New 6. New land. Dtaheité, les; 10., once the The most the Desert. liopolis, is a n. Recent in the si'e the HellesChurches of Pergamos, d Smyrna; - In Syria atileé, $\boldsymbol{P}$ hat and Pada.

Fez, (d), Algiers, (e), Tunis, ( $f$ ), Tripoli, ( $g$ ), Barca, ( $\ell$ ) ; 5. Zatara or the Desert; 6. Negroland or Nigritia or Soudan; 7. Senegambia; S. Upper Grainen; 9. Lower Guinea; 10. Cape Colony ; 11. Mocaranga; 12. Mozambique ; 13. Zauquebar ; 14. Ajan.

Principal Towns.-1.Cairo; 2. Senair; 3. Gondar ; 4. Morocco ; 5. Algiers ; Tunis; Tripoli; Derna; 6. Timbuctoo; 11). Cape Town; 12. Mozambique; 13. Mombaza; 14. Brava.

Islands.-1. Azores or Western Ishads; 2. Madeiras; 3. Canaries; 4. Care Verde; 6. St. 'Thomas, St. Mathew, Ascension, St. Heiena; 6. Madagascar, Bourbon, Isle of France or Mauritius.

Mountains.-Atlas, Sierra Leone or Mountains of the Lions, Rount Lupata, Donga Mountiins, Jebel Kumrah or Mountans of the Moon, Abyssimian Mountains.

Lares.-Dembea, 'I'chad, Maravi, Zawaja, Maik:

Gulfs, Bays and Stratts.-Gulf of Guinea; Saldanha, 'Table, laise, Algoa Bays; Channel of Mozambique, Straits of Babelmandeb, Red Sea; Gulfs of Sidra and Cabes; Straits of Gibraltar.

Capes.-Bojador, Blanco, Verde, Roxo, Palmas, Three Points, Forncaa, Negro, Good Hope, Corrientes, Guardafui.

Rivers - Nile, Niger or Joliha or Quorra, Senergal, Gambia, Zaire or Congo.

Additionif. Divisions.-I. S. ef Barbary are the States of,-1. Darch; 2. Taflet ; 3. Sejelmissa ; 4. The Lamb of Dates ; 5. The USingdom of Fecazan.
II. Upper Guinea contains,-6. Sierra Lcone; 7. Grain Coust ; 8. Ivory Coast ; 9. Gol! Ccast ; 10. Slave Ccast; 11. Ashantee; 12. Dahoniey; 13. Benin; 14. Lalicria.
III.-Lower Guinea contarns,-15. Loango; 16. Congo; 17. Angola; 18. Benguela; 19. Mataman or Ciinbarras.
[V.-Southern Affica contains the Countries of-20. The Caffres or Unbeliverers 21. Hottentots; 22. Boshmans or Bosluuans.
V.-The Eastern Coast contains,-․23. Sabia and Sofala; 24. The Kingdom of Adcl.
VI.-Central Africa contains,-25. Boniou ; 26. Kasson ; 27. Ludamar ; 23. Karta ; 29. Kong ; 30. Bambarra; 31. Beroo; 32. Timbucion; 33. Houssa; 34. Lomiv; 35. Beyharmi; 36. Darfur; 37. Kordofan; 33. Funda; 30. Yarriba; 40. Borgoo ; 41. Nyffee ; 42. Zeg-zeg.

Additional Towns.- (a) Alci:andria, Rosetta, Damietta, Suez, Cosscir, (S'yene,) Elfou, Ruins of Thebes, Dendera, (Tentyra,) Cirgeh;-(b) Dongola;-(c) Axum, Dixan, Mas-uah;-(d) Mogadore, Santa Cruz; Fez, Incquinez, I'stuan, Ceuta, Tangicr, Sallee, Mazapun ;-(e) Orian, Bona, Constantina ;-(f) S'usa, Cabos, Porto Ferina, Ruins of Carthage ;-(g) Mesurata, Lebida ;-(h) Piolemeta.
I.-1. Tutlah; 2. Tafilel ; 3. Sejelmissa; 4. Guergela ; 6. Mowroulh, I'cmissa, Źuela.
II.-6. Freotown ; 7. Sanguin, Sestre Grand: 3. Druin ; 9. Cape Coast Castle, Acamn ; 10. Praya; 11. Coomassie ; 19. Aboncy: Whidah, Artrah; 13. İenin, Calabar; 14. Mfonrovia.
1II.-15. Loango ; 16. St. Saluctior; 17. St. Paul de Loanda; 18. New Benguela, Old Bengueli.
IV.-22. Lattakoo, Malapeetzee, Kurecchence, Bakarrikarri.
V.-23. Sofcla ; 24. Zeila.
VI.-25. Fatteconda ; 26. Kooniacary; 27. Jarra, Eెenowm; 23. Kemm o ; 29. Kiong; 30. Seg̃o, Jennt, Silla, Sansanding ; 31. Walet ; 32. T'imbuctoo ; 33. Saciatoo, Cassina, Kano 34. Bornou, Koulia, Angorno: ; 35. Jegharni ; 36. Coblé: 37. Obeydah; 33. Funda; 39. Eyco or Kaiunga; 40. Boussia, Waba, Kiama ; 41. Koolfa; 42. Zavia.

Addirronar Islands.-1. St. Michael, T'crecira, Pico 2. Porto Santo; 3. Grand Canary, Ferro, Tenerife; 4. St. Antonio, St. Nicholas, St. Jago, Majo, Fogo; 5. Prince's Island, Fernando Po; 6. Comoro Isles, Zanzibar, Pemba, Mahe, Almirante ; 7. Korguelan's Lanit or Island of Deselation, Amsterdam, St. Paul, T'risian d'Acunha, S. E.' and S. W. of Africa; (see Map of the World.)

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16. Congo ; nbarras. f-20. The Boshmans or

## and Sofala;

26. Kasson ; nbarra; 31. ; 35. Bcer;9. Yarriba;
a, Damictla, es, lendera, Dícan, Masąz, T'stuan, Bona, Conns of Carth-

- Guergela;

3. Druin ; 9. omassic ; 12. 4. Monroria. St. Paul de

ce, Balkarri-

ra, Bెenown: ; Sansanding ; usina, Kano; ; 36. Coblé : $a$; 40. Bous-
rccira, Pico : erifife; 4. St. ; 5. Prince's zibar, Pembra, nd of DesclaS. E. and S.

Anmantess.-The Reyplian Pyramids are concraity saposed to have ben intended as Mussleims for the Kacs. 'I hey wern logun, it was conjectured, about liat yoars betore the birth of Clirish, by Cheops and Cophrencs. Four or thoze ercetions have attracted particular attention. The largeat two are 503 feat high ; -one of then covers 10 English acres of ground, being an exact square of 6 y feet. There are 6 or 7 similar structures, in the Desert, of smaller dimensions. The Sphyne:, a ruck at no errat distanco from the largest pyramid, is shaped into the heal, best, and Negrolike fealures of a Woman. It was formerty fol feet high, but is now more than hali buried in the sand. The ssle of Pharos, which communicated with Alexandria by a bridge, was once faned for its magnificent Tower and Lifrhthouse, buit ly the arehitect Sose trates, in the reign of Polemy pitisade'fhes, at the sole expense of that enterprising monach. FJear the I yramids are the Mumanypits of Erypt. A mumny is an embina med bedy. Many of these, though buried more than 3,000 yean since, are dug from the pits in a perfect state of preservation. The Catacombs are repesitorice for the Dead, consisting of large vatuls, in the environs of the towns. Those in Alexandea were chicty usch as burial-places by the Greeks, and the cotims are placed in in upricht position in niches, rerularly ranced in the walls. The Obcisths were high quadrangular spires of granise, ad rocd with herolyphise or mysterious characters, representing the number of tributery nations which acknowledged the sway of the great Sesastris, his vic 'rics, and the extent of his Eupire. 'The Libyointh, (the ruins of which' are near Lake Moeris, contained 200 rooms and 12 hats said to have been built by 12 Kings, as Miusoleurris for the Royal Race, and the Sacred Crorodiles. fit Elesandria are Pompay's Pillar and Cleopatra's Needle. 'The former is one cntire piece of Gra. nite Marble, 70 feet high, and 25 in circumference. The latter is an Obelisk, on which nystical charactors are inscribed. The Temples, particularly those of Theles, Edfu, and Tentyra, are of vast antiquity, and the largest in the wordd. They are highly ornamented, in the peculiar style of Egytian arcititecture, and covered with numerous hieroglyphics. The Tom's of the Kinge, near 'lhebes, form vast ranges of suhterranenes apartmen's, adorned with ancient paintings, the colours of which are still briliant.

## 1. EXTENT OF COUNTRIES, WITH TILEIR POPULATION TO A SQUARE MLLE.

Square Miles. N. 1 merica ${ }_{1}$. . . . . . . . . . . 9,000 ©00
S. Ainerica.................. $650 ., 009$

Enrope, ...................... $3,751,009$
Asia, . ........................ $16,000,000$
A trica,... . . . . . . . . . . . . . . . 11,000,000
Lower Canada ............. 200,000
Upper Canada,............. 140,060
United States................ 1,009000
England and Wales,....... 58,000
Bcotland, ................... 30000
Ireland,...................... $\quad 30,000$
Inhabitants to one square mile.
18. MOUNTAINS IN THE ORDER OF THEIR HEIGHTS.

English f'eet, above the level of the Sea.
Dwahalagiri, highest of Timaleyah,............... 28,500
Sorata, highest of the A ntos. . . . . . . . . . . . . . . . . . . 25,600
Cinimborazo, S. America, ........................... 21,800
Voleano of Cotopaxi s. Ameri : $1, \ldots \ldots . . . . . . .$. . 19,500
Elbraz. highest of Caueasus,......................... . . . 18,200
Mount St. Elias, IV. America. ........................ . 18,100
Volcano of Popocatepec, Mexico,.................... 18.020
Mount Ararat, Turley in A sia,..................... 17,500
Mountain of Potosi, S. Americia, ................... 16300
Mount Blane highest mountain in Europe...... . 15,680
Mountains of Geesh, Abyssinia, Africa........... 15,050
Peak of Tenerifie, Canary Islands, A fica, ....... 12,236
Atlas, highest peak of Atric: ....................... 11,080
James' Peak, highest of Rocky Mountains,....... 11, 7 (i)
Mount Perdu, highest of the Pyrcnces ............ 11, 283
Ætna, Sicily,…........................................ . . 10,963
Mount Leblanon, Turkey in Asia.. ................ 9520
City of Quito. S. America, … . . . . . . . . . . . . . . . . . . 9, $\mathbf{9 5 6}$
St. Gothard, Switzerland, …......................... 9,075
Peak of Lomnitz, highest of he Carpaihianng.. ... $\quad 8,640$
Highest of the Dofrincs, Norway................... 8.500
Hospice of Great St. Bernard, Switzorland,....... 8040
Highest peak of Bluc Mountains Jamaica,....... 7,500
Chain of Olympus, Turkey in Europe............. 6.500
Mount Washington, highest of the Alleghanies, - $\mathbf{6 . 5 0 0}$
Chain of Mount Ida, 'Iurkey in A sia............. 4.960
Hecla, Iceland, .......................................... . 4900
Vesuvius, Italy, …...................................... $\mathbf{3 , 9 0 0}$
Table Mountain. Cape of Grood Hope............ 3,583
Mount Athos, Turkey in Europe ................. . . . 3,353


III. MOUNTAINS IN GREAT BRITAIN AND IREL\&ND.

itants to one arc mile.
sh F'ect, el of the Sea. 28,500
25,600
21,800
19,500
18,200
18,100
18.020

17,500
16300
15,680
15,050
12,236
11,980
11,760
11,283
10,963
9520
9,256
9,075
8,640
8.500

8040
7,500
6.500

6,500
4,960
4.900

3,900
3,582
3,353
3,000
Feet.
Ben Nevis, the highest mountain in Britain,...... 4,380
Ben Lawers, Perthshirc,............................... 4, 0.51
Cairngorm, Inverness shire, ........................... 4, 4, 050
Ben More, Perthshire, ................................... 3903
Snowdor, Caernarvonshirc,............................ . 3,56
Schehaltion, Perthshire................................... 3564
Cader Id ris, Merionethshire,........................... 3,550
Macgillicuddy's Reeks, Ireland....................... . . 3,404
Crossfell, Cumberland,. ................................. 3,390
Ben Loimond, Stirlingshire,.......................... . 3,202
Goat-field, Arran......................................... . 2,945
Logan House, Pentland Hills, Elinburgh,....... 1. \%09
Leadhills, Dumfries shire,............................. 1,561
Arthur's Seat, Edinburgh,............................... . . 810
iv. RIVERS, IN THE ORDER OF THEIR LENGTH.
Miles.

Missouri, ................................................. 4:000
Mississippi, .. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3,000
St. Lawrence, . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2,000
Nile,........................................................ 2,000
Danube, . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1,000
Ganges,.................................................. . . . 1,600
Euphrates, . . . . . . . . . . . . . . . . . . . . ... .. . . . . . . . . . . 1,500
Indus,.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1,300
Ohio. .. .. ................. .. .. .. .. .. .. .. .. .. ... .. .. 1,000
T'igrisg. . . . . . . . . . . . . . . . . . .. .. .. .. .. .. ...... . . . . 800
Rhine, … ................ ..... ...................... . . 700
Potomac.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 600
Ottawa,.. .................................................. 500

Tagus,................................................. 450
Thames, England,...................................... .. : 180
Shanon, Ireland,.. .................................... 170

## ON THE GLOBES.

## 1.- $-O N$ THE TERRES'TRIAL GLOBE.

L. 'The Artificial Terrestrial Globe represents the natural figure of the earth.
2. The Axis is the rod or wire on which the globe revolves, and represents the imaginary line or axis about which the earth itself turns.
3. The Poles of the earth or globe are the extreme points of the axis, in which it meets the surface; one of them the $\mathbf{N}$. or arctic, the other the S. or antarctic.
4. The Circles on the globe are of two kinds, great and small. Every circle is divided into 360 degrees or equal parts.
5. There are four great circles, viz. : the Bquator or Equinoctial line, the Ecliptic, the Meridian, and the Horizon; and four small ones, viz.: the Arctic and Antarctic circles, the tropics of Cancer and Capricorn.
6. The Equator is a circle every where equally distant from the poles, and divides the globe into the Northern and Southern Hemispheres.
7. The Ecliptic is a circle which cuts the Equator obliquely at two opposite points, and represents the sun's path in the heavens. It is divided into 12 equal parts called signs, and each sign into 30 degrees. The names of the signs are Aries or the Ram $r$; Taurus, the Bull $\gamma$; Gemini, the Twins II ; Cancer, the Crabos ; Leo, the Lion $\Omega$; Virgo, the Virgin $\boldsymbol{m}^{2}$; Libra, the Balance $\approx$; Scorpio, the Scorpion $m$; Sagittarius, the Archer $\ddagger$; Capricornus, the Goat $\mathrm{h}^{2}$; Aquarius,


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8. The Meridian of any place is a circle conceived to pass through that place, and through both the poles, dividing the globe into Eastern and Western Hemispheres; the brass ring which surrounds the globe is called the 1 ra en meridian.
9. The Horizon is a great circle which separates the visible ha' "of the heavens from the invisible; the earth being considered as a point in the centre of the sphere of the fixed stars. The horizon, when applied to the earth, is either sensible or rational. 'The sensible or visible horizon is the circle which bounds our view, where the sky appears to touch the earth or sea. The rational or true horizon is an imaginary plane, passing through the centre of the earth, parrallel to the sensible horizon ; it determines the rising and setting of the sun, stars, and planets.
10. The two Tropics are situated parallel to the equator ; one on each side, at about $23 \frac{1}{2}$ degrees from it. The northern tropic is called the Tropic of Cancer ; the southern, the Tropic of Capricorn ; because they touch the ecliptic at the begining of those signs.
11. The Polar Circles are situated at about $23 \frac{1}{2}$ degrees from the poles ; that on the N . is called the arctic circle, that on the S. the antarctic circle.
12. The Horary or hour circle, is a brass ring surrounding the N . pole, having twice 12 hours marked upon it.
13. The Quadrant of Altitude is a narrow flexible plate of brass, equal to a fourth part of the equator, and divided into 90 degrees.
14. The most remarkable points in the heavens are, 1st the Poles ; 2d. the Zenith and Nadir; the former being the point of the heavens which
is directly above us, and the latter that which is immediately under our feet; 3rd. the Cardinal points, viz.: N.S. E. and W.; 4th. the Solstitial points, the one in the first degree of Cancer, and the other in the first degree of Capricornus; 5th the Equinoctial points, in the first degrees of Aries and Libra.
15. The tropics and polar circles divide the Globe into five portions or belts, called zones; viz. : the Torrid zone, between the tropics; the northern and southern Frigid zones, within the polar circles; and the northern and southern Temperate zones, between the tropics and polar circles.
16. The globe is divided into Climates of halfhours, and climates of months. There are 24 half-hour climates from the equator to either polar circle; and 6 month climates within each polar circle ; making 60 climates from pole to pole.

## PROBLEMS TO BE SOLVED BY THE TERRESTRIAL GLOBE.

Probrem I.-To find the latitude of any place.
Rude.-Bring the place to the graduated side of the brazen meridian, and the degree of the meridian that stands immediately over it shows its Iatitude or distance from the equator.
Exercises. - What is the latitude of Edinburgh, Rome, Montreal and the Cape of Good Hope ?*

Prob. II.-To find the longrtitude of any place.
Rule. - Bring the place to the edge of the meridian ; and the degree of the equator cut by the

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hich is ardinal lstitial er , and is 5 th rees of
meridian will be the longitude of the place, or its distance east or west of the first meridian, viz. that of Greenwich.

Ex.-What is the longitude of Paris, Quebec, Jerusalem, and New Orleans? (m)

Prob. III.-The longitude and latilude of place being given, to find that place.

Rule.- Bring the given longitude to the edge of the meridian ; look for the given latitude on the meridian, and immediately under it is the place required.
Ex.-What places are nearly in the following longitude and latitude? Long. 30 W . lat. $56^{\circ} \mathrm{N}$.-long. $18 \mathrm{t}^{\circ} \mathrm{E}$. lat. $944^{\circ}$ S. - long. $30 \circ \mathrm{E}$. lat. $31 \circ \mathrm{~N} .-$ long. $4 \circ 15 \mathrm{~W}$. lat. $40 \circ 25 \mathrm{~N}$.

Prob. IV.- To find the antoci, (n) of any place.

Rulf.-Find the latitude of the place given ; reckon the same number of degrees on the meridian on the opposite side of the equator, and the inhabitants of the place found under that point of the meridian will be the antæci of the place.

Ex.-Who are the anteci of the reople at Montrenl, Jsle of Frarice, St. Helena, and St. Domingo ?
( $m$ ) Longitude may be converted into time, by allowing $15^{\circ}$ to an hour; consequenily every degree will answer to 4 minutes of time, and 15 ' of a degree will answer to one minute of time; and so for the rest. Thus, for instance, any place that is $15^{\circ} \mathrm{E}$. of London will have noon, and every hour of the day, one hour before the inhabitants of London: it $30^{\circ}$, there will be two hours' difference, and so on; because, being more eastward, that place will meet the sun so much seoner. In the same manner, any place $15 \circ$ W. of London will have noon, and every hour of the day, one hour later; at $30^{\circ}$, there will be two hours difference, and so on ; because, being sn much more westward, that place will be so much later in meeting the sun.
( $n$ ) The antreci are those who live in the same scmicircle of the meridian; but in opposite parallels of latitude: both of them have noon and millnight at the same instant of time; brict the seazons of the year ars different: it being summer to the one when it is winter to the other; and to the one it is the longest day when it is the shortest to the other.
$P_{\text {rob. }}$ V.-To find the perioci (0) of any place.
Rule.-Bring the place given to the meridian, and 12 on the hour-circle to the meridian; then turn round the globe till the other 12 comes to the meridian, and the place which is under the same degree of the meridian as the place given will show the periœci of that place.

Ex- Who are the periceci of the people of Honduras, Jamaica, Borneo, and Lassa?
Prob.VI.--To find the antipodes ( $p$ ) of any place.
Rule.-Bring the place and 12 on the hourcircle to the meridian then turn round the globe till the other 12 comes to the meridian, and under the same degree of the meridian as the latitude of the place given, but on the opposite side of the equator, will be found the antipodes $(q)$.

Ex. - Who are the antipoles of the people at Lima, Buenos Ayres, Owhyhee, and Canton?

Prob.VII.-- To find the difference of latitude aud
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$t u$ the difference of longitude between two given places.
(o) 'The periaci are those who live under the same parallel of latitude, but in opposite semicircles, or opposite meridians; they have their summer and winter at the samo time; but their day and night at contrary times.
(p) The antipodes are those who live diamctrically opposite to each other, or stand, as it were, feet to feet, on different sides of the equator; they have their days and nights directly contrary, as also their seasons of the year; when it is summer with the one, it is winter with the other; and when it is noon to the one, it is midnight to the other.
(q) The antrcci, pcriaci, and antipodes of any place, may be found thus: Place the two poles of tho globe in the horizon; and bring the given place to the eastern part of the horizon; then, if the given place be in N . latitude, observe how many degrees it is to the northward of the east point of the horizon; the same number of degrees to the southward of the east point will show the anteci ; an equal number of degrees, counted from the west point of the horizon towards the north, will show the periocci; and the same number of degrees, counted towards the south of the west, will point out the antipodes. If the place be in south latitude, the same rule will serve, by readirg S . for N . and the contrary. an; then les to the the same vill show
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ma, Buenos
tude and en places.
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opposite to ent sides of contrary, as $h$ the one, it ne, it is mid-
ace, may be orizon ; and on ; then, if degrees it is ame number the antæci ; point of the nd the same e west, will latilude, the rary.

Rule.-Find the latitudes of both places, and take the difference or sum of these according as they lie on the same side, or on different sides of the equator. The difference of longitude is found in the same way, by taking the difference or sum of the longitudes according as they lie on the same side, or on opposite sides of the first meridian.

Ex.-What is the difference of latitule between London and Edinburgh, and between London and Lima; also the difference of longitude between Rome and Constantinople, and between Ronie and Montreal?

Рrob. VIll.-To find the distances between two places on the globe.

Rule.-Lay the quadrant of altitude over the two places, and count the number of degrees between them.
Ex.-What is the distance between Pekin and Rome, Liston and Vienna, Jamaica and Naples, Montreal and Jerusalem?

Рrob. IX.-To rectify the globe for the latitude of any given place.

Rule.-Elevate the N. or S. pole, according as the place is $\mathbf{N}$. or $\mathbf{S}$. of the equator, till its altitude or height above the horizon be equal to the latitude of the place.
Ex- Rectify the globe for Cairo, Botany Bay, Madras, and the Isle of Bourbon.

Рrob. X. -The hour being given at one place, to find the hour at any other place at the same time.

Rule.-Bring the given place and hour to the meridian, then turn the globe till the other place comes to the meridian, and the hour immediately under the meridian is the time required $(r)$.
( $r$ ) If the difference of longitude between any two places be divided by 15, the quotient will be the difference of time at the places; and, if the difference of time be multiplied by 15 , the product will be the difference of longitude.

Ex..- When it is noon at Amsterdam, what is the time at Canton and Montreal? When it is 8 in the norning at Edinburgh, what is the hour at Moscow and Delhi? When it is midnight at Lisbon, what o'clock is it at Florence and Washington?

Prob. XI.-To find the sun's place in the ecliptic for any given time.

Rule.-Find the given day on the wooden horizon ; directly opposite to it in the adjoining circle is the sign and degree in which the sun then is; look for the same degree in the circle of the ecliptic drawn on the globe, bring it to the meridian, and that is the sun's place at noon for the given day.
Ex.--What is the sun's place on the 14th of July, the 2\%th of February, the 12th August, and the 7th of January.

Рrob. XII.-To find on what point of the compass the sun rises or sets on a givell day at any particular place; also the amplitude of the sun.

Rule.-Recify the globe for the latitude of the place, and find the sun's place on the ecliptic for the particular day ; observe what point on the circle of rhumbs the sun's place in the ecliptic cuts, when brought to the eastern elge of the horizon and also when brought to the western. The number of degrees counted on the horizon, between the points of sun rising and setting and the E. or W. is his amplitude.
Ex....On what point of the compass does the sun rise and set at Edinburgh on the 5th of May, at Ronie on the 10th of September, at Mexico on the 13th January, and at Alexandria on the 8thi of October?

Prob. XIIL.-To find towards which point of the compass one place is situated in respect of another.

Rult.-Bring the latter place to the zenith ( $s$ ) ;

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fix the quadrant of altitude ( $t$ ) above it to the meridian ; lay it along the former place, and it will cut the horizon in the point required.

Ex-Towards which point of the compass is Jerusalem from Edinburgh, Jamaica from London, Cairo from Venice, and Madras from Montreal ?

Рrob. XIV.-To find at what hour the sun rises and sets on any day in the year, also the length of the day and night.

Rule.-Rectify the globe for the latitude of the given place, bring the sun's place for the particular day, and 12 on the hour-circle to the meridian; the hours cut by the meridian, when the sun's place is brought to the eastern and western edge of the horizon, will be respectively the times of rising and setting. The hour of sun-rising, doubled, gives the length of the night ; and the hour of sun. setting, doubled, gives the length of the day ( $u$ ), exclusive of twilight $(v)$.
Ex...At what time does the sun rise and set at Dublin, Mecea, Canton, and St. Peterburg, on the 20th of May; and what is then the length of the day and night at those places?
( $t$ ) Instead of the quadrant of altitude a thread may be used.
(u) In all places upon the equator the sun rises and sets at sim he whole year round. From thence to the polar circles the days ncrease as the latitude increases: so that at those circles themelves the longest day is 24 hours, and the longest night the same. From the polar circles to the poles. the days continue to lengthen ho weeks and months; so that, at the poles, the sun shines for ix months together in summer, and is absent from them six months a winter. Every part of the world, however, partakes of an equal hare of light and darkness.
( $v$ ) Twilight is caused by the atmosphere refracting the sun's ys towards the earth, and always begins when the sun aproaches within $18^{\circ}$ of the eastern part of tho horizon, and ends then it descends $18^{\circ}$ below the western. There can be nocionnual twilight to any place having less than $48^{\circ} 3^{\prime} 2^{\prime}$ of latitude.

Prob. XV.-The day of the month leing given, to find the sun's declination (w), and all those places where the sun will be vertical ( $x$ ) on that day.

Rule.-Find the sun's place in the ecliptic for the given day, and briug it to the meridian ; the degree marked over it is its declination; turn round the globe, and all the places which pass under the particular degree of declination will have the sun vertical on that day.
Ex.-.- What is the sun's declination, and to what places will he be vertical on the 15th of Jantary, the 22d of June، the 1st of August, and the 25th of December?

Рrob. XVI.-A place being given in the torrid zone, to find on what two days the sun will be ver. tical there.

Rule.-Find the latitude of the place, turn round the globe, and observe the two points of the

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Ex. it nool 30th 0 ecliptic that pass under the particular degrec ${ }^{\text {" }}$ latitude; the days on the wooden horizon, opposit to these points, will be the days required.
Ex.--On what days is the sun vertical at Lima, Madras, Capo Verde, and the isle of Bourbon?

Prob. XVlI.-At a given place and hour, to find where the sun is then vertical.

Rule.-Find the sun's declination, or the par allel to which he is vertical that day, and bring the given place and hour to the meridian; then turn the goobe till 12 at noon come to the meridian ; the intersection of the meridian, with the parallel o latitude to which the sun is vertical, will be the place required.

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Ex....Where is the sun vertical on the 5th of April, when it is 9 in the morning at Lishon? Where is the sun vertical on the 26th of July, when it is 8 in the evening at Montreal ? Where is the sun verical on the 3 d of November, when it is midnight at Palermo?

Рrob. XVIII.-- The day, hour, and place, being given, to find all those places of the earth where the sun is then rising and setting, and where it is noon and midnight.

Rule.-Find the place to which the sun is vertical at the given hour, bring it to the meridian, and rectify the globe for the latitude of that place. In this position of the globe, to all the places under the western edge of the hrizon the sun is rising; to those under the eastern, setting; to those under the upper half of the meridian, it is noon; to those under the lower half, midnight.

Ex.-AAt what place is the sun rising and setting, and where is it noon and midnight, when at Vienna it is 8 in the evening on the 30th of March ?

## II.-ON THE CELESTIAL GLOBE.

1. The Celestial Gilobe is an artificinl representation of the heavens, on which the stars are laid down in their apparent situations. The diurnal motion of this globe is from E. to W., and represents the apparent diurnal motion of the sun, moon, and stars. In using this globe the student is supposed to be situated in the centre of it, and viewing the stars in the concave surface.
2. A Constellation is an assemblage of stars on the surface of the celestial globe, circumscribed by the outlines of some assumed figure, as a ram; a dragon, a bear, \&c. This division of the stars
into constellations is necessary, in order to direct a person to any part of the heavens where a parti. cular star is situated.
3. The Zodiac, on the celestial globe, is a space which extends about 8 degrees on each side of the ecliptic, like a belt or girdle, within which the motions of all the planets are performed.*

## PROBLEMS TO BE SOLVED BY THE CELESTIAL GLOBE.

Prob. I.-To find the latitude and longitude of any given star (a).

Rule.-Put the centre or 90 th degree of the quadrant of altitude on the pole of the ecliptic, and let its graduated edge fall upon the star ; then the degree of the quadrant over the star is its latitude, and the degree of the ecliptic cut by the quadrant is its longtitude.

Ex-What are the latitudes and longitudes of Castor (in Go mini), and Sirius or the Dog-Star (in Canis Major (b)?

Prob. II.-The longitude and latitude of $a$ star being given, to find the star upon the globe.

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Rule.-Place the centre of the quadrant of altitude on the pole of the ecliptic, and make its graduated edge intercept the ecliptic, in the longitude of the star; then the star will be found under the degree of the quadrant denoting is latitude.
Ex... What star is that whose longifude is $297^{\circ}$, and whose latitude is $30^{\circ}$ N. ? What star is that whose longitude is $142^{\circ}$, and whose latitude is $22 \circ 30^{\prime} \mathrm{S}$.?

Prob. III.-T'e find the declination of the suth or stars (c).

Rule.- Bring the sun's place, or the star, to the brazen meridian, and the degree over it is its de. clination.

Ex.- What is the declination of the sun on the $12 t$ of Novem:ber, and of Capella (in Auriga)?

Prob. IV.-To fird the right ascension of the sun or stars (d).
Ruve.-Bring the sun's place, or the star, to the brazen meridian, and the degree of the equinoctial cut by the meridian is the right ascension.
Ex.--What is the sun's right asconsion on the 23d of August, and of Rigel (in Orion's foot)?

Prob. V.-The right ascension and declination of a star being given, to find the star on the globe.

Ruce.-Bring the degree of the equinoctial denoting the right ascension to the meridian, and the degree of the meridian denoting the declination will be over the star.

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Ex.-. What star it that whose right ascension is $114^{\circ}$, and detlination $28^{\circ} 30^{\prime}$ N. 3 . On what day is the sun's right ascension $291^{\circ}$, and declination $22^{\circ}$ S. 3

Prob VI.-To dispose the celestial globe so as to exhibit the actual appearance of the heavens at any given time and place.

Rule.-Rectify the globe for the latitude of the place, and set it due N. and S. ; then bring the sun's place in the ecliptic, and the 12 th hour of the horary, to the brazen meridian. Turn the globe
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the da. towards the E. or W. according as the time is" ${ }^{\text {b }}$ fore or after noon, till the given hour on the hourcircle comes to the meridian, and the globe will represent the actual appearance of the heavens at that time and place.

Ex-Represent the face of the heavems at Montreal for 10 'o'ciodk in the evening of the 15 th' of A pril, at London for 4 'o'clock in the morning of the 17 th of January.

Prob. VII:-To find when a given star rises, sets, or culminates, at any place on a given day.

Rule:-Rectify the globe for the latitude of the place, and bring the sun's place in ecliptic, and the 12th hour of the horary, to the brazen meridian; then bring the star successively to the eastern side of the horizon, the meridian, and western side of the horizon, and the times of its rising, culminating, and seiting on the hour-circle, will come to the meridian respectively.

Ex.-Required the rising, culminating, and setting, of Alde baran, (in Taurus) at Toronto on the 10th of February; and ot $A$ lphecica (in Coroma Borealis) at Quebec on the 3d of November.

Prob. VIII-- 10 find on what day any given star comes to the meridian, at any given hour.

Rule- - Bring the given star and hour to the

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meridian, then tum the globe till 12 at noon comes to the meridian, and the degree of the ecliptic cut by the meridian is the sun's place. The day on the horizon corresponding with that dugree is the day required.

Ex. - On what days does Antares (in Scorpio) come to the meridian at 10 o'clock in the evening? On what day does Regulus (in Leo) come to the meridian at 2 o'clock in the morning ?

Prob. IX, - To find those stars that never rise, and those that never set, at a given place, not under the equator (e).

Role--Rectify the globe for the latitude, and make it revolve. The stars that do not sink below the wooden horizon, are those that never set; and the stars that do not appear above it, are those that never rise in that latitude.

Ex. What stars never rise and never set not Montreal, and the Cape of Good Hupe ?

Prob. X-To find what stars are risiner, setting, or cnlminuting, at any given time and place, and also the altitude and azimuth of any star, at the same time and place.

Rule.-Rectify the globe for the latitude of the place, and bring the sun's place in the ecliptic, and the 12 th hour of the horary, to the brazen meridian. Turn the globe towards the $\mathbf{E}$. or W. according as the time is before or after noon, till the given hour on the hour-circle comes to the meridian ; than the stars under the eastern side of the horizon are rising, those under the westeru side are setting, and those under the meridian are
(e) If the place be under the equator, every star is 12 houra above and 12 hours below the horizon.
culminating. ---If the quadrant of altitude be fixed on the zenith, and its graduated edge made to fall on a given star, the degree of the quadrant over the star will be its altitude; its azimuth is the number of degrees, counted on the horizon, from its intersection by the quadrant to the $\mathbf{N}$. or $\mathbf{S}$. point of the horizon.

Ex.o-What stars are rising, setting, and culminating, at Montreat: on the 6th of March at 11 in the evening; and at Canton on the 18th of October at 4 in the morning?

Pror. XI.-To find the amplitude of any star, and the length of its diurnal arc, at any given place.

Rule.-Rectify the globe for the latitude of the place, and bring the given star to the eastern part of, the horizon; the number of degrees between the eastern point of the horizon and the star is the amplitude required, either $N$. or S.-The number of hours passed over in moving the star from the eastern to the western part of the horizon is the s'ar's diurnal arc, or its continuance above the horizon of the given place.
Ex.--Required the aimplitude and length of the diurnal are of Spica Virginis (in Virgo) at Paris ; and of Procyon (in Canis Minor) at Venice.

Prob. XII.-To find the apparent angular. distance between two stars; that is, the arc of the great circle intercepted betwern them.

Rule.-Apply the quadrant of altitude to the globe, so that its graduated edge may fall on both the stars; the zero, or commencement of the graduation, being on one of them; then the degree of the quadrant over the other will be the angular distance required:
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- Ex.- Required the apparent angular distance between Betel guese (in Orion) and Aricles (in Aries); and between Arcturus (in Bontes) and Pollux (in Gemini).

Pror. XIII.-The latitude of the place, the altitude of a star, and the day of the month; being given, to find the hour of the night.

Rule.-Rectify the globe for the latitude, bring the suu's place and 12 on the horary to the meridian, and fix the quadrant in the zenith; then move the globe and quadrant till the star comes under the quadrant at the given altitude, and the meridian will cut the horary at the hour required.

Ex. - At Edinhurgh, on the 20th of January, when the altitude of Capella (in Auriga) is $70^{\circ}$, what is the hour of night? At London, on the 10 th March, when the altitude of Deneb (in-Leo) is. $500^{\circ}$, what is the hour of the night?

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[^0]:    * The Leeward, Windward, and Virgin Islands, are callod the Caribbean Istands.

[^1]:    - Columbia contains New Grenada, Venezuela, Ecuadir. $\ddagger$ Guiana is owned by the English, Dutch, and French.

[^2]:    *'The number of exercises on each problem may be increased as occasion requires; the insertion of answers to them is thought quite unnecessary.

[^3]:    (s) That is, rectify the globe for the place.

[^4]:    (w) The declination of the sun in its distance from the equato N. or S .
    (s) That is, to find over whose heads the sun will pass that das

[^5]:    - Except the newly-discovered planets or asterids, Cere and Pra!las.
    (a) The latitude of the heavenly bodies is measured from the ediptic N. and S. ; their longitude is reckoned on the ecliptic from the first point of Aries, eastward round the globe. The sun; being adways in the ecliptic, has no latitude.
    (b) The largest and brightest stars are of the first magnitude, and bocome visible when the sun has sunk $12{ }^{\circ}$ below the horizon; those of the 2d, 3d, and 4th magnitudes are seen when it is 13, 14, and $15^{\circ}$; and those of the 5th and 6th when the sun has deew cended $18^{\circ}$ below the horizon. All stars smaller than those of the 6 th mapnitude, cannot be seen by the naked eye, and are called telescopic stars.

[^6]:    (c) The declination of any heavenly body is measured upon the meridian from the equinoctial.
    (d) The right ascension of any heavenly body is is distance from the first meridian (or that which passes through the first point of Aries,) rounted on the equinoctial.

