THE SMITHSON INSTITUTION

The Regents and Secretary of this Institution have annually made to Congress, as by law required, a full report of its operations for each preceding year, and these reports have been regularly ordere to be printed; but from the tardy manner in which the public printing was for several years executed the Smithsonian Reports would be forgotten before they were printed, or might get through the press among other Congress matter months before it would be heard of; and thus they have seldom received from the public journals the attention which their interest and value rendered them so worthy of

The seventh Annual Report of the Regents contains the reports for the year 1852 of Jos. HENRY, Esq., Secretary of the Institution; C. C. JEWETT, SPENCER F. BAIRD, and E. FOREMAN, Esqs., Assistant Secretaries; the reports of the Executive and Building Committees, and Proceedings of the Board of Regents. It is of considerable interest, and gives a favorable view of the condition, labors, and prospects of the Institution.

Prof. HENRY's report presents a general view of the labors and services of the Institution during the past year in the broad field of scientific and philosophical effort. He says:

"The institution has promoted astronomy by the ai furnished the researches which led to the discovery of the true orbit of the new planet Neptune, and the determination of the perturbations of this planet and the other bodies of the solar system on account of their mutual attraction. It has also aided the same branch of science by furnishing instruments and other facilities to the Chilian expedition, under Lieut. Gilliss; and by preparing and publishing an ephemeris of Neptune, which has been adopted by all the astronomers of the world.

"It has advanced geography by providing the scientific traveller with annual lists of the occultations of the principal stars by the moon for the determination of longitude; by the preparation of tables for ascertaining heights with the barometer; and by the collection and cation of important facts relative to the topography of different parts of the country, particularly of the val

ley of the Mississippi.
"It has established an extended system of meteorolo gy, consisting of a corps of several hundred intelligent observers, who are daily noting the phases of the weather in every part of the continent of North America. It has imported standard instruments, constructed hundreds of compared thermometers, barometers, and psychrometers, and has furnished improved tables and directions for observing with these instruments the various changes of the atmosphere as to temperature, pressure, moisture, &c. It has collected and is collecting from its observers an extended series of facts, which are yielding deductions of great interest in regard to the climate of this country and the meteorology of the globe.

"The institution has advanced the science of geology

by its researches and original publications. It has made a preliminary exploration of the remarkable region on Missouri river called "the Bad Lands," now printing a descriptive memoir on the extraordinary remains which abound in that locality. It has assisted n explorations relative to the distribution in this country of the remains of microscopic animals, found in immen-quantities in different parts of the United States. "It has made important contributions to botany by

means of the published results of explorations in Texas New Mexico, and California, and by the preparation and publication of an extended memoir, illustrated with color ed engravings, on the sea-plants of the coast of North

"It has published several important original papers or physiology, comparative anatomy, zoology, and different branches of descriptive natural history; and has prepared and printed, for distribution to travellers, a series of lirections for collecting and preserving specimens. "It has advanced terrestrial magnetism by furnishin

instruments for determining the elements of the magnetic force to various exploring expeditions, and by publish-ing the results of observations made under its direction at the expense of the Government.

· It has collected and published the statistics of the libraries of the United States, and perfected a plan of stereotyping catalogues, which will render effective, as a combined whole, all the scattered libraries of the country. "The institution has also been instrumental in directing

attention to American antiquities, and has awakened such an interest in the subject as will tend to the collect tion and study of all the facts which can be gathered relative to the ancient inhabitants of this continent. It has also rendered available for the purposes of the eth-nologist and philanthropist the labors of our missionaries among the Dakotas, by publishing a volume on the lan-guage of this tribe of Indians, and has done good service to comparative philology by the distribution of directions for collecting Indian vocabularies.

It has established an extended system of literary and scientific exchanges, both foreign and domestic, and annually transmits between the most distant societies and individuals hundreds of packages of valuable works. It has presented its own publications, free of expense, to all the first-class libraries of the world, and thus rendered them accessible, as far as possible, to all persons who are interested in their study. No restriction of copy-right has been placed on their republication, and the truths which they contain are daily finding their way to the general public through the labors of popular writers The distribution of its publications and the system of exchanges has served not only to advance and diffuse knowledge, but also to increase the reputation, and consequently the influence, of our country; to promote a kindly and sympathetic feeling between the New World and the Old, alike grateful to the philoso-

pher and the philanthropist.
"These are the fruits of what is called the system of active operations of the institution, and its power to produce other and continuous results is only limited by the amount of the income which can be appropriated to it since each succeeding year has presented new and im-portant fields for its cultivation. All the anticipations indulged with regard to it have been fully realized; and after an experience of six years there can now be no doubt of the true policy in regard to it."

This system, as it appears, has to meet the opposition of persons who would like to subject science and philosophy, even in their most elevated walks, to the votes of a county precinct or city ward meeting, and to transform this institution into a battle-ground for contending officeseekers. The Professor says:

"The proposition is frequently urged upon the Regents by persons who have not duly considered the will thson, or who fail to appreciate the importance of the present plan, that a large portion of the income should be devoted to the diffusion of a knowledge of some popular branch of practical art; and there may be some fea that a timid policy on the part of the friends of the In-stitution will lead them to favor such a plan."

The honor of the institution is also involved in the continuance of this system, for it has been only upon the expectation of a faithful performance of its engagements with other institutions throughout the world that it has itself received many of the benefits and advantages which are reported.

"Whatever, therefore, may be the future condition of the institution, the true policy, for the present, is to devote its energies to the system of active operations. All other objects should be subordinate to this, and in nowise suffered to diminish the good which it is capable of producing. It should be prosecuted with discretion, but with vigor; the results will be its vindication."

It would appear from the report of the Executive Com mittee that the finances of the institution are in a good condition; for, though during the year \$14,047 were paid on the building, there was still on hand, after all the expenditures for publications and other purposes, besides the original bequest, upwards of \$200,000 of accrued

On the subject of the Smithsonian edifice Prof. HENRY makes some very judicious remarks, which we quote, with a call of particular attention to the concluding sentences

"The business of the institution would be much facilitated were this part of the building completed. Since Congress has authorized the establishment of a library and museum, it will be well to place all the objects of in terest to the public in the main building, and make this exclusively the show part of the establishment, devoting the wings and ranges and rooms of the towers to the business operations and other purposes of the institution.

In the present condition of affairs there is no part of the which the public has not access, and, consequently, business has to be transacted amidst constant ions. The loss of time and effective life to which all are exposed who occupy a position of notorie ty in the city of Washington is truly lamentable; and where this is enhanced by facility of access to gratify mere curiosity, the evil becomes scarcely endurable. Progress in business, under such circumstances, can only be made by an encroachment on the hours usually allot ted to rest, and that too at the expense of wasted energies and shortened days.'

During the year the following memoirs were collected into volumes and distributed to public institutions in this ountry and abroad :

1. Observations on Terrestrial Magnetism.

2. Researches on Electrical Rheometry.
3. Contributions to the Natural History of the fresh water fishes of North America.

4. First part of the Marine Alge of the coast of the

5. Plantæ Wrightianæ Texano, Neo Mexicana, part 1. Inited States. 6. Law of Deposite of the Flood Tide, its dynamical

tion and office. 7. Description of ancient works in Ohio. Occultations visible in the United States during th

ear 1852. 9. A Grammar and Dictionary of the Dakota language. Since the date of the previous report to the Regents everal articles were printed and partially distributed, of

which we can only find room for three, vis: "Directions for making collections in natural history. This is a pamphlet of twenty-four pages, by Prof. BAIRD, and is much called for by the correspondents of the In-

" A work by Prof. JEWETT, containing an exposition of the system adopted by the Smithsonian Institution for constructing catalogues of libraries by means of separate stereotype titles, with rules for the guidance of libra-rians and examples for illustration. This work is comprised in seventy-eight pages, and, though not large, it has been produced at the expense of much time and

"The first part of the collection of tables to facilitate meteorological and other calculations, by Prof. Guyor. This was mentioned in the last report, and has been stereotyped and distributed. It is a very acceptable present to the meteorological observers of the institution and other persons engaged in scientific investigations."

In reference to the interesting feature of the public lectures in Washington, which are so much of a boon to our resident citizens and strangers visiting here, the Professor remarks:

"In selecting lectures the consideration of mere popular effect has not been regarded. The persons chosen have been such as to give weight to the lecture, and to reflect credit on the institution. The object has been to give instruction rather than amusement; to improve the public taste rather than to elicit popular applause. The nstitution, to be respected, must maintain a dignified haracter, and seek rather to direct public opinion than o obtain popularity by an opposite course.

The report on the Library by Prof. JEWETT states that and that chiefly by exchange. He says:

"The accessions from this source are nearly five times a number those of the preceding year. They may be onsidered but the first fruits of the system of scientific and literary exchange established and sustained by this nstitution. They show also that the benefits derivable by the library from its connexion with the system of active operations had not been over-estimated. A considerable portion of the money expended in publications returns in the shape of books for the library. These again are constantly increasing the efficiency and inteest of the publications.

"The value of the books received by exchange cannot be estimated by their numbers or even their nominal price. They are works of the first importance to the scientific student, and which it is very difficult to procure by purchase, even with large funds at command.

"The largest and most important of the gifts which the institution has received from individuals is that from James Orchard Halliwell, Esq., the distinguished archæologist. This gentleman has presented to the institution an extremely curious, interesting, and instructive collection of MS. bills, accounts, inventories, legal instruments, and ther business papers, extending from 1632 to 1792, neatly arranged and handsomely bound in fifty-four vo-lumes, mostly of folio size. This collection may justly be said to be unique of its kind. It is of interest not only to the antiquary and the collector of curious relics of olden imes, but as an authentic record of prices for more than one hundred and sixty years it is of great value. As a picture of the mode of life and domestic habits and exenses of English families of former generations, it is a

" The number of articles received under the copywright law is somewhat larger for the last than for the preced-ing year. It has increased from year to year since the organization of the institution, although no special efforts have been made to induce publishers to comply with the law. Every book which has been received has been imnediately and carefully recorded, and a certificate of deposite sent (generally by return of mail) to the depositor.

"The number of books purchased during the last year

is very small. The money was especially desired for the successful completion of enterprises undertaken by the department of active operations. Besides this, the rooms temporarily occupied as a place of deposite for books were, even at the beginning of the year, filled nearly to the capacity of the shelves erected, and it was thought best not to incur further expense for arrange-ments which could not be of permanent utility. "The selection of books for purchase has been uni-

formly of such as were immediately needed, not of such as might be more remotely useful. It would have been preposterous to attempt with our means the immediate formation of a universal library; though we have not seased to cherish the hope and belief that a great library of reference and research will ultimately be gathered here.
"Our expectations for the library are not limited by

our immediate means of purchasing books. The history of other libraries in this country shows that any permanent and well-located institution of the kind may reasonably expect accessions by donation and bequest, in pro-portion to the importance of its position. The more conpicuous, central, and permanent the establishment, the nore likely it is to attract the liberal notice of those who have valuable collections to bestow.
"The location of the Smithsonian Institution at Wash-

ngton, its permanent endowment, its independence of partisan and sectarian influences, the high position in the scientific world which it has already achieved by its active operations, the results of the system of exchanges, of which we are now enjoying but the first fruits, together with the various means which have been adopted or suggested for aiding other libraries and advancing bibliographical objects, conspire to give prominence to the library of this institution; and they will, before many years, render it, if not the largest and they will, before many years, render it, if not the largest and most important in the country, at least a very valuable auxiliary to our national literary We expect, however, that it will increase mostly by exchanges and gifts. We may justly hope that many valuable private collections of books in particular departments of learning will be placed here, to remain as the best monument that can be reared to commemorate the learning and taste as well as the liberality of their

" The view which we take of the necessity of large collections of books leads us to express the gratification which we feel at the large appropriations made this year by Congress for replenishing the desolated shelves of its library. Should this liberality be continued, it will be providing with great rapidity for many of the wants which it has been our purpose to signalize. We doubt whether any appropriation made by Congress has been hailed with more intelligent pleasure. It revived the hopes of the studious throughout the country, and led to the belief that the hands which had begun this good work would carry it on to perfection. With an overflowing treasury, the possession of an enlightened and appreciative nation, we may well hope that money will not be wanting to establish the independence of American learn-ing, to render it no longer provincial, no longer relying for its support upon the libraries of Europe.

"Another movement in the same direction, suddenly

assuming a position of commanding importance, is the establishment of the Astor Library of New York. It was endowed by a business man, who had the sagacity to place it under the management of one who had made the selection, purchase, and care of libraries a professional study for many years. In the history of similar collections

has collected, during two visits to Europe, nearly 60,000 volumes, with about \$63,000. But this is not all: these volumes were not taken at random; they were bought from a list previously prepared, without regard to cost. The collection may, for practical utility and adaptation to its purposes, for just distribution among all the depart-ments of learning, for choice of editions and material perfection of copy and binding, challenge comparison with

any of its size in the world.

"During the year I have prepared a work containing an exposition of the system for constructing catalogues of libraries, and a general catalogue, by means of separate stereotype titles, with rules for the guidance of librarians, and examples illustrating the rules. This work, although not large, cost me considerable time and labor.

" It was stereotyped in our own office by the new process, which we have done so much to perfect and adapt to our own peculiar purposes. The typographical appearance of the book is very satisfactory, although the work was executed by unskilful hands and under many unfavorable circumstances. In our operations of stereotyping we have experienced many delays and difficulties, from the fact that there was no stereotype office or type foundry at hand, and no persons accustomed to the process of stereotyping or the manufacture of the delicate apparatus required. We have lately, however, secured the services of an accomplished mechanic, who has already made great improvements in our processes and apparatus, and has acquired much skill in the new art.

"A series of bibliographical works has been projected and commenced by the institution, intended gradually to form a library of valuable aids to research in particular departments of knowledge. The facilities afforded for form a library of valuable aids to research in particular departments of knowledge. The facilities afforded for prosecution of this plan by the stereotyping of the titles separately, so that each part may first be printed by itself, and afterwards, without loss of the previous labor and cost of printing, be continued to form the complete work, would alone justify the labor and expense of establishing an office for stereotyping. The work already executed, or in progress, will furnish a ready test of the practicability and efficiency of the mode of stereotyping which we have employed." we have employed.'

The special report of Prof. Spencer F. BAIRD is replete with topics of scientific and popular interest. On the particular subject of exchanges of publications with the foreign world, it is stated that the operations of the institution have been very extensive, and productive of the happiest results. Prof. BAIRD remarks :

"It may safely be estimated that at least three-fourths of the scientific exchanges of this country and of Europe now pass through the Smithsonian Institution. The expense, which is borne by the institution, though con-siderable, is trifling in proportion to the good accom-plished in the diffusion of knowledge."

The number of foreign institutions receiving exchanges from the Smithsonian amount to three hundred in all, of which two hundred and seven receive the Smithsonian contributions in full. Of the whole transmission in this way the Smithsonian made direct presents of 5,756 volumes, against 3,439 presents from others.

In the Natural History department the deposites with the institution were quite numerous. They were objects in zoology and palmontology, consisting of mammals, birds, reptiles, fishes, and invertebrates, plants, fossils, and minerals. The report says:

"The collection of mammals from Northern Europe announced last year as having been transmitted by the Academy of Sciences, Stockholm, has since arrived, and fully realized the anticipations of its value. It consists f well-preserved skins and skeletons of nearly all the larger species, as reindeer, elk, stag, bears, wolves, foxes, glutton, &c. All of them are indispensable to the proper determination of the allied American species—a task which could never before be accomplished for want of which could never before be accomplished for want of just such material. At the present time the Smithsonian Institution is in possession of the best collection of the larger North American and European mammalia, both skins and skeletons, to be found in the United States. "As usual, the most marked additions to the collection

of the institution are to be found in the department of the Library had nearly doubled in size during the year, reptiles and fishes. These have been received from all ortions of the United States, including California, New

"Various remains of the North American Indians have been received by the institution during the year; but much the most important addition in this department is to be found in a large number of axes, arrow-heads, and other stone instruments from Denmark, presented by Prof. C. C. Rafn, of Copenhagen; thus affording an ineresting opportunity of comparing the closely-allied imelements used by the aborigines of Europe and of North

In an appendix to his report Prof. BARRD recounts a number of scientific explorations by different departnents of the Government, all of considerable and seveal of high interest. We can make room for notices of one or two only, remarking at the same time that most of these explorations received more or less aid from the Smithsonian Institution:

"Lieut Gilliss returned in November last from a three years' residence at Santiago, in Chili, to which place he and gone for the purpose of observing the parallax of Venus. During the time of his absence he made more than forty thousand observations on this planet, besides gathering a very large number of facts in regard to othe departments of astronomy, magnetism, meteorology earthquakes, geography, &c. He also made very valu able collections in natural history, especially in ornitho-logy, in many respects superior to those collected and

oublished by Claude Gay, in his History of Chili.
"Lieut. McRae, who, with Lieut. Phelps, had been the companion of Lieut. Gilliss, was detached by him to carry a magnetical and meteorological profile across the conti-nent over the Andes. This route will be, for the most part, through an unexplored region, and the result will doubt be of very great interest.

"The expedition for the exploration of the Zuni river. organized under Capt. L. Sitgreaves, returned last win-ter, after having accomplished all its objects in a remark-ably short space of time. Accompanied by Lieut. J. G. Parke, Dr. S. W. Woodhouse as surgeon and naturalist, Mr. R. H. Kern as artist, and Mr. A. Leroux as guide, the party left the pueblo of Zuni on the 24th of S ber, with an escort of thirty men, commanded by Major H. L. Kendrick, of the 3d artillery. Passing down the Zuni (which proved to be an inconsiderable stream) to its junction with the Little Colorado, sixty miles below, they ontinued down to the Cascades, some eighty-six miles urther, where the stream falls into a deep can this point they were compelled to strike across to the Colorado, and descended this stream about two hundred and fifty miles to its mouth. Crossing over to San Diego, ney in the end of December. A great part of the route never having been before explored, much was done by the expedition in rectifying and improving the geography of the region, while Dr. Woodhouse made use of the scanty opportunities afforded by the barren soil to collect speci-mens of natural history, many of which have proved new

The report of Prof. Foreman, in charge of the meteorological department, (now held by Prof. BLODGET,) presents a numerous list of persons throughout the country co-operating with the institution in this branch of science. It says:

"With but few exceptions, there have been received regular monthly returns of observations from all the stations previously reported, and it is gratifying to find that the system has been extended by the addition of several stations. The new observers reside chiefly in the Western and Southern States-districts of country from which meteorological information was much needed. The spirit manifested by the corps of observers has also improved, as is manifest from the registers being carefully kept, and the desire of all who have but few instruments to supply themselves in this respect, and at their own cost. I to be regretted that the limited means at the disposal of the institution for this object, and the many demand upon it for other purposes, render it inexpedient at preent to aid observers in the purchase of instruments.

"Soon after the occurrence of an earthquake in the central part of the United States, on the 29th of April, 1852, a circular was issued by the Secretary requesting a report of any observations which had been made or plies have been received embodying facts sufficient to enable the institution to mark the point of chief intensity, and trace out the diverging lines along which the earthwave passed."

GROANING AND CRYING .- The introduction of chloroform and ether, with a view to prevent the pain of surgica operations or blunt the effects of nervous diseases, is hailed everywhere as a great blessing to mankind. This view, however, is questioned by a French surgeon, who not long since published a dissertation, in which he takes the ground that the more groaning and crying during a painful surgical operation the better it is for the nervous system. From the benefit which hysterical and other nervous patients derive from groaning and crying, he supposes that by these processes of nature the superabundant nervous power is exhausted, and the nervous system is thereby rendered calm, and even the circulation of the blood greatly diminished. He relates a case of a man who by means of crying and bawling reduced his pulse from one hundred and twenty to fifty in the course of two hours! That some patients often have a great satisfaction there is nothing to compare or compete with the gathering of the Astor Library in New York.

"It was established in 1849. The appropriations for the purchase of books have been placed entirely at the disposal of Dr. Joseph G. Cogswell, the librarian. He has collected, during two visits to Europe nearly 60 000. who are never nappy out when they are under some course of medical dietetic treatment, the French surgeon assures that they cannot do better than to groan all night and cry all day. By following this rule, and observing an abste-mious diet, a person will effectually escape disease and may prolong life to an incredible extent.

The METROPOLITAN HALL, in the city of New York, which was destroyed by fire on Sunday morning, was erected in 1850, and was the largest and most elegant hall in the United States. It occupied ground 100 by 150 feet. The hall and hotel buildings were owned by ohn Lafarge, and valued at \$340,000.

The LAYARGE HOTEL was 150 feet front on Broadway, 160 feet deep, and six stories in height. It had just been finished and furnished, and was to have been opened for the reception of cempany in a few days. Mersrs. Wright, Laniers & Co. were to manage the new hotel, and had fitted it up in a style of magnificence. They had purchased upwards of \$130,000 worth of furniture, &c., and over two-thirds of this amount was in the building when it was consumed. The hotel was designed by Jas. Ren-wick, jr., with a front of white marble, in the Grecian style of architecture, and had over three hundred sleep-ing rooms. In its interior finish, frescoed ceilings, and general arrangements it had no superior in beauty and convenience. It had been leased, in connexion with the convenience. It had been leased, in connexion with the hall, and including all the stores but two, to Mesers. Wright, Laniers & Co. at an annual rent of \$54,000.
The whole rental of the building was over \$60,000 a year.
The insurance on the property was only \$175,000.

THE PLANET VENUS AND ITS SUPPOSED SA-TELLITE.

We remember to have pointed out to a very young child this beautiful planet when it was shining alone in the horizon soon after the set of the sun. The little girl exclaimed, "Twinkle, twinkle, little star!" "How I wonder what you are!" with a child-like curiosity, expressed in a common nursery rhyme. It recalled the same aspiration in the words of mature and educated manhood: Would to God the light of that star would bring with it something beside the knowledge of the fact that it is a sphere revolving around the sun, at such a disance and in such a time!

Venus, the morning and evening star, the Lucifer and Hesperus of the ancients, is the most conspicuous and peautiful of all the planets. At the period of its greatest splendor it casts a shadow, and under favorable circumstances is seen at noon-day, shining then with the light of twenty stars of the first magnitude.

The periodic time or year of Venus is determined with fractional exactness. Its position, as it was at a certain hour some two thousand years ago, was recorded; its place in the heavens at a certain epoch of the present year is accurately determined. Between which epochs how many times this star has passed around in its orbit! The error of the two observed positions, though remote in time, must be small; and the error, divided by the many orbital rounds, fades away to nothing. Thus astronomers know the year of Venus to be two hundred and twentyfour days and seven hundred and seven thousandths of

day. Astronomy cannot thus accurately measure this planet's distance from the sun. An error of observation here will not fade away by being mingled with other observations; for all the observations may be in error on one side, and the mean of them no nearer to the truth than any single measurement.

It is true that Kepler's law comes to the aid of science and says, with an authoritative voice : If the Earth at its period has a mean distance of 95,298,260 miles, then Veous at its period has a distance of 68,760,000 miles. But is the Earth's mean distance 95,298,260 miles? The practical astronomer replies: "We know this distance is not over ninety-five and a half, nor under ninety-five millions of miles. We can rely upon our measurements within a three-hundredth part of the distance. So the mean distance of Venus partakes of this acknowledged incertainty within a three-hundredth part.

Instrumental measurement we do not consider as ne essary for the determination of the mean distances of any planet of which we know the period. The year of Venus being 224,707 days, its mean distance is 68,810,930 miles, (if without error in the process of computation,) the mile being 1.7920ths of the earth's diameter.

Thus we have the period and mean distance of this planet accurately determined; and we believe its maguitude or diameter can be deduced with equal precision.

Dr. Herschel considered the diameter of Venus to be about 8,000 miles, a little more than the Earth's. His son places its value at 7,800 miles, a little less than the Earth's. Prof. Hind says "the best observations assign about 7,900 miles."

The best observations, then, make the diameter of Venus to be the same as that of the Earth; for who supposes that measurement could detect a difference of 20 miles of this diameter?

Why should astronomers hesitate one moment on this subject? The best observations make the Earth and Venus as sister-worlds of one and the same magnitude; and the human mind, taught by repeated instances of symmetry-of the "natura consensus et convenientia," does not question the interesting result that these two planets of the solar system are exactly of equal diameters!

We now come to the rotation of Venus on its axis. The face of this planet, so near the sun, is too bright under telescopic vision to allow of any precise knowledge of the subject, says a very competent astronomer.

We have given in another paper a method for obtaining the axial periods of the planets. By this method the period for Venus is 30 hours, if without a satellite; and say 20 hours if there is an attendant moon.

The question, "has Venus a satellite?" is still open. For this assertion we have (in conversation) the authority of two eminent American astronomers.

The difficulty of detecting a satellite, if one exists, arises from the fact that its enlightened side can never be fully turned towards us excepting when the planet is beyoud the sun, at its greatest distance from the earth. And, according to Mr. Gregory, a satellite may exist and not be easily or usually seen, because of unfitness of its surface to reflect the light of the sun, as is the case (parally) with our moon, which has dark spots on its surface. Could there be a discovery more interesting, and one more honorable to American science, than to discover the lost satellite of Venus? We say the lost satellite; for why should not Venus have a moon, being of equal diameter with the Earth, which has an attendant star? We may depend upon it that the analogy between these sister-

worlds is not confined to their magnitudes. We will not follow up the train of mathematical reason ing that deepens in our minds the impression that Venus has its moon. It has been seen. Cassini, in 1672, observed a little star about three-fifths of Venus's diameter in distance from Venus. It had the same phase as its primary. It was one quarter as large. And remember, reader, that our moon is one quarter of the diameter of the Earth.

Mr. Short, a very eminent optician, in 1740 saw the satellite. He describes it thus: "Its light is not bright

and vivid, but its disc was clear and well-defined." In 1761 Mr. Montaigne saw the satellite for four succe sive evenings. It had the phase of Venus. It changed its position relatively to the planet. Mr. Montaigne gave to it the same diameter as Cassini gave-one-fourth of that of the planet.

In the month of March, 1764, the satellite was seen by several astronomers. And note this: it was seen from places widely different from each other. Rodkier and Horrebow at Copenhagen, with a refracting telescope, and Montbarron at Auxerre, with a Gregorian reflector, repeatedly saw the star between the 3d and 29th of that month. Its diameter was estimated, as before, at onefourth of the diameter of its primary.

Professor Lambert collected all the observations to gether, and "from them he deduced a pretty consistent orbit." According to Lambert, its period of revolution is 11d. 5h. 13m., and its mean distance 255,000 miles-240,000 miles is the mean distance of the moon from our globe; and if Venus has a satellite, it must be, we are well convinced, distant thirty of the diameters of its

The satellite of Venus has not been seen by the astronomers of this century; and because not seen by them they doubt its existence, forgetting that their not seeing is not by far so good an argument of its non-existence as the seeing it by others is of its existence.

That many believed that they saw near Venus a small star, with a well-defined disc, undergoing the same change of phase as its primary, cannot be questioned. How could all these observers be mistaken? They saw the same object, for they agree in its position relatively to Venus. All give to it one magnitude; and the result of these observations of the star produces a consistent orbit for it as the satellite of our sister-world.

How beautiful are these analogies and correspondences between the planets Earth and Venus! They are millions of miles asunder, and, measured by God's own hand, are exactly of one size and volume, both having satellites, and these satellites being of equal diameters and at one distance from their respective primaries.

Is it not also probable that the periods of these satel lites differ from each other, as do the orbital periods of their primaries; and that Venus's year contains the same number of lunations as the year of the Earth? Where ends the likeness and correspondences of these two spheres? The orbit of Venus is like that of the Earth's, having

average of the mean distances of the Earth and Venus is also the average of the mean distances of all the planets of the first group. Venus has an atmosphere like that of the Earth. It

little ellipticity and being nearly in the same plane. The

the compuscular light (the twilight, or the atmospheric refraction of the sun's rays) has been measured by Her-

schel the elder, by Schröter, and by other astronomers. A knowledge of these facts will give a deeper interest n the planet Venus-the bright and beautiful star that ng what it is!

Our article may be considered as a dream of one wh has fallen' asleep while thinking of the harmonies of the spheres. Let it be so considered; it has been to us a leasant dream; and the reader may rest assured that there are no results of practical astronomy which forbid the waking idea that these two planets are thus "double one against another."

## TO THE EDITORS.

Messrs. Gales & Seaton: Allow me, gentlemen, to gratify my cacoethes scribendi at the expense of your indulgence in requesting your kind notice of the following additions to my glossary, which appeared some time ago in the Intelligencer. These additions may, it is hoped, relieve a few of the French words now in common use, or rather abuse, from the torture unmercifully and certainly undeservedly inflicted on them.

Vis-à-vis .- For the benefit of those who often lug these words into their conversation, allow me to observe that these words stand for visage-d-visage. Anglice, face to

face, opposite.

Boudoir.—This word is a derivation of the word "bou der," i. e. to pout. There was a time when ladies, dis satisfied with themselves or others, used to indulge in that amiable faiblesse, mais "nous avons change tout cela." We have changed all that, for ladies do not con-ceal that weakness now, but inflict that enjoyment some times on their friends without concealment. Boudoir, therefore, means pouting-room, the door of which is not, as in days of old, hermetically scaled against intruders.

Bouquet, now very elegantly tortured into "boquet," as sobriquet is mutilated into soubriquet. This is rob-

bing Peter to pay Paul with a vengeance.
One is really at a loss to account for this dishone transition, unless that those words were imported into England when its prohibitory custom-house laws forbid French fancy articles from being introduced; and thus, by Anglicising those words, re-entered them as English. In this country, where no laws of that kind are in force, it is inexcusable to commit such vandalism; and we humbly beg our friends, if use they will or must those words, rer der unto Cæsar the things that belong to Cæsar. The very flowers must feel a blush of shame mantling their leaves and petals when presented under the misnomer of

It is a positive fact that an individual using a word he either does not understand or cannot pronounce will pu the strongest emphasis, as if fearful that he might be cused of not being familiar with it, or that he was no treating it proper respect. Sobriquet means a nickname, an epithet usually applied in derision or burlesque. Now, if it be absolutely necessary to use that word, use it, in the name of French sense, as it is written, and do not crush it with the weight of an additional vowel totally useless. Curfew .- This word, so often used, especially in poetry is neither more nor less than a barbarous contraction of th words "couvre-feu" -cover fire. During the occupancy of England by the Normans, a law imposed on every house holder to cover the fires in his dwelling at the sound o the nine o'clock bell, in order to stop the frequent con-flagrations to which the thatched wooden houses fell so ten and unmercifully a prey.

Verdict.—For the benefit of jurymen and others, per

mit me to state that verdict is the contraction of the La tin words "vere dictum"-true said.

Budget is derived from the French word "bougette, a little bag used in ancient times when travelling. In consequence of the English Ministers of State using suc a bag in carrying their documents to Parliament, the word has been ever since retained, though now applied in Kris Kringle.-Who, after having ransacked his brain

for some clue, would understand those words to mean, or rather intended to mean, the infant Christ? The Gerdiminutive kindlein, or kindchen, is vulgarly formed into kindel; and it is the custom in that country to tell children that at Christmas the infant Christ, or Christ Kindel will bring them some gifts. These words have been trans planted into this country, but unfortunately and irreverently have become pitifully misspelt into an unmeaning

THE RELIGIOUS MOVEMENT IN CHINA.

The North China Herald, in reviewing the religion and writings of the rebels, says: For ourselves we unreservedly avow the conviction that no unprejudiced mind can survey the religious fea-tures of the case without coming to the conclusion that

foreign nations and foreign governments must be preparof the most important revolutions of modern times. They mere dregs of civil discontent and social anarchy, but as composed of those moral and religious elements of strength, prestige of victory, and a real claim upon the sympathy of Christendom.

Those who have carefully and impartially studied the character of the rebellion will have read their religious edicts and manifestos in vain if they are induced for a moment to confound T'haewing-wang and his host of imperfectly enlightened christian warriors with the lawless rabble, banded together through the Triad and other se cret societies, who, taking advantage of the distur in the interior, have recently captured the cities of Amoy and Shanghai.

The present concluding number of the series before adverted to contains no slight proofs in favor of the views now advocated. We perceive none of that nationa arrogance and blind conceit which has in past times ren dered the Chinese inaccessible to foreign missionary in fluences. They give utterance to sentiments which might find no incongruous place in the writings of more matur-cd christians. They speak of the ancient monetheism of China, when their patriarchs of old worshipped the one God by the light of nature and the dictates of conscience They make mention of the gradual decay by which the one Almighty Shang-te had his worship divided with that of the corrupt shin, and the introduction of demonolatry corrupted the pure monotheism of China. They allude to the downward tendency and decay of the national re-ligion in the introduction of the idolatries of Buddhism and Taouism. They recognise the prevalence amon foreigners of that knowledge of the one TRUE God which among the Chinese themselves was, above two thousand years ago, corrupted by the intermixture of a demonolatrous and idolatrous superstition. They argue from the material beauties of the visible creation on the greatness, the glery, and the independence of auxiliary sub ordinates in the work of creating the universe, which be long to Him who is the Almighty and Omnipresent Crea tor. They demolish every pretended argument in favo of image worship, and point their countrymen away from idolatry to the duty of prayer, as alone all-eff

with God. In spite of the errors and defects which have been noticed in some of their documents, and which (it is to be hoped) further intercourse with European missionary instructors will hereafter correct; in spite of the disad-vantages which have resulted from a forced profession of christianity and the probable existence of two classes christian professors among their multitude, the leaders of this movement have nevertheless given no dubiou signs of religious sincerity and patriotism, and have pro claimed to their countrymen such views of moral and re ligious truth as every enlightened friend of his race mus

WHALE FISHERY .- In the annual review of the whale fishery, published in the Whalcman's List, it is stated that the importation of oil and bone has been larger the past year than that of any year since 1848, and that the trade continues to sustain itself, with even less than the fluctuations incident to most branches of commerce. Price have ranged high during the year. The total importa-tions into the United States for 1853 are as follows: Sperm oil 103,077 barrels; whale oil 260,114 barrels; whale-bone 5,652,800 lbs. There are now employed in the whale fishery 602 ships and barques, 28 brigs and 38 schooners, making a total tonnage of 208,029, more than three-quarters of which is owned in Massachusetts. The remainder is owned in Rhode Island, Connecticut, and New York. There has been an increase of tonnage past year of 1,743 tons. In 1853 about 235 ships cruised in the northern seas, two of which were lost. ber cruising in those latitudes is 48 less than last year It is estimated that the catch this season will barely com up to the average.

THE WAR or 1812 .- The Salem papers have publish lists of those residing in that vicinity who are surviving Dartmoor prisoners. In Marblehea forty-two persons are now alive who were confined in Lartmoor, and twenty four who were confined in other English prisons during the war now survive. A correspondent of the Salem Ob-server furnishes a list of 115 of the armed vessels belonging to the United States which were employed to cruis was measured by Mr. Dun, at the transit of 1761, and the depth was found to be fifty miles—(Trans. Royal

The prizes taken during the war number 1,808, and were valued at \$168,863,519. Soc.) And an atmosphere, too, of the same density for

THE NAVY.

PROM THE PHILADELPHIA CHURCH REGISTER.

When the chaplain of the Naval Academy at Annapolis (the Rev. Mr. Bartow) made his last report to his diocesan, he closed it with a sentence to which we desire now skirts our evening horizon—a world like ours, with the full moon perhaps, as we look at the star, reflected from placid lakes rippling with an evening breeze; and some little child there, looking at our Earth and wonder
little child there, looking at our Earth and wonder
marked: "The fact that the moral atmosphere which marked: "The fact that the moral atmosphere which the moral atmosphere which the moral atmosphere which the marked: "The fact that the moral atmospher marked: "The fact that the moral atmosphere which emanates from navy officers gives its own character to our country abroad, and affects materially all the foreign missionary stations, commends this school to the special prayers of all christians, as they love their country and the souls of men." This reflection well points our thoughts to the high powers and responsibilities of a navy in time of peace, no less than in times of war. Through the pacific functions of a navy a nation may do much of its share in the work of civilizing and benefiting mankind; and it is because we are blessed with peace that kind; and it is because we are blessed with peace that we should, as a nation, cultivate these opportunities of we should, as a nation, cultivate these opportunities of good, as well as provide for a navy's belligerent efficiency. When, some years ago, an enormous Paixhan gun on board of one of our steamships-of-war was called "the Peace-Maker," it was a foolish misnomer that was followed by a fearful catastrophe. It is in a different feeling that we allude to the peace powers of our navy. Even in its present restricted state the navy is rendering important aid to the cause of civilization, by such ing important aid to the cause of civilization, by such special services as the expedition of Japan, the cruising for the suppression of the slave trade, the exploring voyage to the North Pacific, the services in connexion with the coast survey on both sides of the continent, the ex-ploration of the Gulf Stream, and the extension and improvement of the lighthouse system. The use of a navy, as a protector of commerce, was vividly portrayed by an eminent American statesman in the following passage of eminent American statesman in the following passage of a private letter, which we are permitted to publish. The date, as well as the earnestness of the writer's feeling and style, will together indicate the authorship of it as that of the late John Sergeant. It was written when Mr. Sergeant was on his way as United States Minister to the

Congress of Panama:

"U. S. SHIP HORNET, AT SEA, DECEMBER 14, 1826. "Last evening we came up with a brig from Port au Prince bound to Mobile, and I put on board of her a letter.

"Nothing could be more beautiful than the scene around us when we were alongside of the brig. The sky and the sea when we were alongside of the brig. The sky and the sea were perfectly serene. The moon was shining in undisturbed splendor, and there was a little breeze, just enough to push the vessel along without producing any agitation. It was some pleasure, too, to know that our presence gave comfort to one of our countrymen. We are in a part of these seas some time ago infested by pirates. The night was very propitious for p.ratical adventure. The poor fellow who commanded the vessel, having nothing else to occupy his attention, had probably been dwelling upon these things till his imagination became filled with horrors. You may judge, therefore, how happy he must have felt at being under the protection of a friendly battery like that of the Hornet, which assured him of entire safety. This is the great value of a navy in time of peace. It ly battery like that of the Hornet, which assured him of entire safety. This is the great value of a navy in time of peace. It is the visible arm of our country stretched out to cover our fellow-citizens, so that they may pursue their lionest occupations in peace and safety. It is pleasing also to see how the spirit of our institutions spreads itself over the ocean, and even modifies the stern countenance of warlike preparation and military power. The rights and the feelings of the citizen are every where respected, and instead of the blustering, overbearing, and arrogant assumption of superiority which marks the intercourse of the ships-of-war of some nations with a merchantman, our officers uniformly observe the most marked and decided delicacy of deportment. If this tone be preserved, as no doubt it will, there can be no question that a navy is in every respect better than allowing, or rather obliging, merchantmen to arm for their own defence. It is probably cheaper, that is, than the aggregate cost of equipping merchant vessels chantmen to arm for their own defence. It is probably cheaper, that is, than the aggregate cost of equipping merchant vessels for defence. It avoids the danger of infusing a military temper into the merchant service, calculated to generate piratical dispositions among seamen. It is more effectual; an armed merchantman offers a chance to a pirate, for he may succeed in a conflict; but a well-appointed public vessel looks down opposition, and puts an end to piracy itself. And, besides all this, it shows us our country in the most engaging point of view, watching overand protecting us wherever we go. These notions happened to occur, and I thought I might as well put them down. Nor are they altogether unconnected with my personal feelings. I felt proud that evening of being upon the quarter-deck of one of our country'sships, surrounded by a set of brave fellows, ready to face every danger, and provided with every means of annoyance, yet observing the most respectful deference for the rights and feelings of an humble unarmed individual. This morning we had left the brig out of sight; but he has nothing to fear; our cruisers have cleared the seas of pirates and piracies." the seas of pirates and piracies.

FROM THE LONDON TIMES OF DECEMBER 14. The Imperial State Printing-office at Vienna has lately

published an interesting work\* from the pen of Chevalier Auer, the director of the establishment. This work, which is now before us, was originally intended for the Austrian public, but it deserves in scarcely a lesser degree the attention of all interested in the higher branches of the art of printing. The German text may, perhaps, be a sealed book to numbers who would gladly peruse the volume if written in their own language, but there is one part of the publication at least which speaks to artists of all nations, and which may be judged, and must be ad-mired, by practical printers as well as by photographers, desurbtimes, and wen of science. draughtsmen, and men of science. The Imperial State Printing-office at Vienna, though

originally intended to serve as an establishment for the printing of State papers, diplomatic circulars, and pro-clamations, has for many years past overstepped the narthe Cabinet. Under the direction of a series of able and enlightened men, among whom its present chief, the Chevalier Auer, stands forth with great distinction, the establishment extended its sphere of action, and served the purposes of science and art quite as much at least as the requirements of Austrian policy. Supported by a liberal grant from the State, the Imperial Printing-office was enabled to procure type which, in the hands of an ordinary printer, would certainly never pay its cost, and to undertake the publication of works which, though invaluable to the learned, would infallibly have ruit ordinary publisher. In this manner, by a wise liberality, and at the cost of a comparatively small annual burden upon the public funds, the Austrian Government has the honor of having fostered to maturity an institution which stands unequalled in the history of the art of printing, and the credit of having, by a series of successful experiments, obtained results which will eventually benefit the public quite as much as they have already been of signal benefit to science. To give an idea of the enormous mass and variety of type accumulated in the "cases" of the establishment, we need merely say that the enuof the establishment, we need merely say that the enumeration of the various sorts fills three closely-printed pages, and that there is not a nation in the world having letters of some sort whose language the Imperial State Printing-office cannot undertake to print. Some years ago, when Messrs. Bagster, of Paternoster-row, planned the publication of their colossal work, "the Bible of wery Land," they wished to enrich the book with a series of native alphabets. But here a serious difficulty presented itself. Many of the characters in which their specimens itself. Many of the characters in which their specimens of Bible texts were given are little known even to the learned in Europe, and some of them had never before appeared in print in England. Every effort was made to procure a complete series; but, as it was found that many alphabets could not be obtained, the design of supplying the comparative tables was about to be abandoned. At this juncture the State Printing-office at Vienna standed in and supplying the comparative tables. stepped in, and supplied Messrs. Bagster with a complete series of the alphabets of all the types used throughout

Not less distinguished, and perhaps of more general in terest, is the progress which the establishment has made in the perfection of existing modes of copying and multiplying drawings and engravings, and the experiments and adaptations of newly invented processes of printing sketches and pictures. Its woodcuts, of which specimens are given in Chevalier Auer's work, command the admira-tion of the best of our artists; and the specimen plates of chemitypy; of engravings on steel, copper, and glass; of lithography, in blacklead, chalk, and colors; of chemigraphy, galvanoplasty, stylography, galvanography, glyphography, photography, and mykrotypy excite the admiration and delight even of those who usually take less interest in the perfection of the various branches of less interest in the perfection of the various branches of an art which, up to the present, has been too much neglected in this country. But the most startling and admirable for fidelity and nicety of execution are the specimens of a process of reproduction which, if not actually invented in the Vienese Printing-office, has, at all events, been brought to a wonderful perfection in that establishment. The Natureelbetdruck, as it is called at Vienna, is a method of obtaining fac similes of leaves, mosses, plants, and other subjects, the perfect reproduction of which requires a minuteness of detail which it is not within the province of the human hand to execute. In this ingenious proceeding the subject to be copied is placed upon liquefied metal, and a perfect impression is obtained, which, copied by means of galvanoplasty and transferred upon a plate, may be multiplied to any number of copies that may be desired. The specimens given of this extraordinary process suffice to convince even the most incredulous of the perfect truthfulness of the method. They bear the stamp of nature on the face of them. They conbear the stamp of nature on the face of them. They con sist of leaves, flowers, mosses, stones, and lacework, of which it is no figurative speaking if we say that they are taken from life, for they appear as if the original speci-mens were pasted on the paper. Each thread and fila-ment of the lace in particular is distinct to the touch, and it would be difficult to persuade any person ignorant of the process that the specimens of Naturselbstdruck in Chevalier Auer's book are productions of the printing-press.

\*Der Polygraphische Apparat, oder die verschiedenen Kunstfächer der Kaiserlich-Königlichen Hof- und Staats-druckerei zu Wien. Von Alois Auen. Vienns, 1868.