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MR. GLADSTONE was supposed to be shelved by the last election, when he earned his defeat by proposing to relieve the middle and higher classes from the income tax, and throw the whole burden of taxation upon all classes equally. But his genius has shone the brighter for the shocks and rubs of adversity; he has been more originative in starting discussion than ever before. His opposition to the absurd Church Bill, which Disraeli and an exasperated majority hurried through Parliament, taught one wing of the Church where their true friend was. And now he lets the other, the fiercely Protestant party, see that he appreciates their position and can state their (theoretical) case, with a power of conviction and of eloquence that their idol and his rival has no claim to.

His pamphlet, *The Vatican Decrees in their Bearing on Civil Allegiance*, is not a proposal to inaugurate any change in the policy of England or of the English Liberals towards the Roman Catholic Church. Mr. Gladstone rejoices in all that has been done to relieve his Roman Catholic fellow-citizens from disabilities, and give them equality before the law. Whatever remains to be done to that end he is willing to help in doing. But his pamphlet is "an expostulation" with his fellow-subjects of that faith. He urges—in view of recent conversions in high places—

that no Englishman can enter that church "without renouncing his moral and mental freedom, and placing his civil loyalty and duty at the mercy of another." He regards every patriotic Englishman who embraces the Roman Catholic creed, as defined by the Council of the Vatican, as having placed himself in a false position. He has two masters, whose commands will be sure to differ and clash, and he cannot serve both. Either he will virtually give up his English birthright and become, as Lord Acton defined himself in the House of Lords, "an Englishman if you will, but first of all a Catholic," or he must put himself into a position of disobedience to an authority that he regards as the channel of a divine wisdom, whenever Rome says one thing and England another.

The pamphlet has already called forth several replies,—one from Gladstone's relative, Archbishop Manning—another from Monsignor Capel—a third (not in that form) from the Pope himself. It is easy to see what the effective line of argument in reply is. Roman Catholics differ from other Christians and from all theists, not in believing that there is an authority higher than that of the State, and before whose demands allegiance to the State must give way, but merely in holding that this authority is more definite and tangible, and its decisions more easily and directly ascertained. Every man who believes in a God, whose will is revealed either in the primary moral instincts and intuitions, or in a written revelation, or in both, must necessarily believe in a higher law, in obedience to which it may be necessary to disobey the law of the State. Does not Mr. Gladstone serve two masters? Is he quite sure that their commands will never clash? "True," he would answer, "but the two masters to whom I object are coordinate political powers within the State system of Europe. They have hostile policies, one of which I hold to be clearly retrogressive and unrighteous, and I think that any man who gives an honest attention to the facts must see as much. I appeal to enlightened Englishmen whether the demands and policies of Rome are such as commend themselves to their consciences as absolutely right." Which brings the matter to a question of fact between the two parties.

The true issue lying behind all seems to us to be this: "Did the Vatican Council's definition of the Pope's infallibility merely

declare that the Pope possessed, when speaking *ex cathedrâ*, the power to decide all questions of dogma? That is, did it declare that he possessed the authority which was previously defined as inhering in a General Council presided over by the Pope himself? Or did it declare him infallible both as to law and fact—both as to dogma and the special cases arising out of its practical application?" Mr. Gladstone is perhaps bent on forcing an answer to this question. If the answer be the one we have last suggested, then the argument seems to us a very strong one. If it be the other, then the position of English Catholics, as regards the civil power, has undergone no essential change in consequence of the Vatican Council's decision. They are still free to resist the commands of the Pope where they clash both with civil allegiance and conviction of right—free as their Catholic fathers were to extort Magna Charta in the face of a bull of excommunication—free as the Catholic Lord Percy of Effingham was to lead the English fleet against the Armada, whose banners a Pope had blessed.

If there is one British official whose position is unenviable, it is the finance minister for India. To carry on an extremely expensive, because dangerous government, where the people hoard away the millions they get for raw produce, and where officials hoard up their salaries to carry back to England, and that in a country that has no manufactures, a lifeless trade and a starved agriculture, is no easy problem. A very plain solution might seem to be the levying high duties upon foreign imports, as a means to bring large revenues to the treasury, to give employment to the labor that runs to waste, and to bring back to life the murdered manufactures of the country. Such a proceeding would be a thing of course were there not a "science" and a theory that forbids it; free trade being the first law of nature, all things must conform to it.

During the months that followed the suppression of the mutiny, the direction of Indian finances fell into the hands of some thick-headed routinist at Calcutta. We have tried to learn his name, that we might hand it down in ignominy, and failed. The poor fool thought that the government of India might as well be carried on for the benefit of the natives; that there was no need of

sending Indian cotton round the world to be woven and spun—let them do it at home; that if India needed railroads and had millions of excellent iron ore on the surface, square miles of good coal not far below it, it would not be a bad idea to set some of these idle Hindoos at work to make iron rails. So he put on protective duties, and the people actually began to make what they had been buying, without seeing the loss involved in employing idle hands at home. Fortunately this stupidity was knocked on the head. Jas. Wilson, editor of *The Economist*, a great light of the Cobden school, went out to India at Palmerston's request, and his first proceeding was to cut down the tariff and stop the home manufacturing. It might have been thought that this was a gain forever; if ever a country had the light of "the science" to steer its financial course and bring it prosperity, India was that country. But India has not prospered; taxes fall heavier and heavier; as the Earl of Mayo declared, they form the greatest and the lasting source of native dissatisfaction with British rule. And no wonder. They are levied to pay high salaries, mostly to English office-holders, who carry the money out of the country, while the old native office holders spent it at home. They are levied upon an agricultural country, whose manufactures—once vast in extent and marvelous in the quality of their productions—have been crushed out by foreign competition. They take the shape of government monopolies of some of the articles of prime necessity, such as salt, most needed by a rice-eating people of all peoples. Salt is worth £34 a ton, not very far inland in India. It has been argued that the tax on it does not press heavily on the people, for the average consumption in Bengal, Orissa, etc., for every person is much the same as the allowance made to the convicts in Indian prisons and the soldiers in Indian armies. The recent census has completely upset these calculations by showing that the estimates of the population upon which they were based fell far short of the facts, that some districts were twice as densely populated as was supposed, and the mistakes thus corrected were not matters of hundreds and thousands, but *hundreds of millions*.

That sort of indirect taxation has manifestly reached its limit in India. The direct taxation of the land reached its limit long ago, and is more oppressive than that of the native governments which preceded England. Nothing is left but heavy duties upon

imports, and to these Indian financiers have again had recourse. Unhappily the new enactment was not accompanied with an equal tax upon native manufactures, and the perverse natives—under the captainship of English capitalists—are actually treating the new tariff as a protective one, and again going at the work of manufacturing cotton goods for themselves. They make no great quantity of them, to be sure, but the native Indian has simplified the clothes question to such a degree that he needs but little. And so Manchester finds the balance of trade falling still more heavily against her. Indian cotton she must have, and the Hindoo will not buy enough "cheap and nasties" to pay for it. He never did do it; he does less now than ever.

Manchester has sent up a deputation to Lord Salisbury, Secretary of State for India, to ask that the duties be taken off. "Very sorry," says his lordship, "if they act as a protective tariff; but I can't give up the £800,000 a year they bring me; I have no surplus to fall back on. But even if they were taken off the natives would go on spinning and weaving. ['We would see about that,' says Manchester, *sotto voce.*] They grow the cotton, they have labor in plenty and quite suitable. They want nothing but coal and capital, and now, also, we find 17,000,000 tons of coal or thereabouts, in one neighborhood. That they have begun manufacturing, shows that they are not without capital."

The best protectionist comment that could be given, is that of *The Spectator:* "We believe this argument will, some years hence, prove sound; but as yet, while coal is dear, communication not perfect, and the habit of manufacture, on the great scale, not formed, there is this fallacy in it. The import duty pretty nearly represents the local manufacturer's profit, in excess of the interest he could get, without exertion," *i. e.*, as a money lender, mortgagor of the farms of the poverty stricken ryots, &c., &c. "Abolish the duty, and the mills would first languish and then stop, as the native manufacturers did." If the editor of *The Spectator* were finance minister for India, would he abolish the duties?

In France there has been a rest between the convulsions. McMahon urges in his message an abolition of the stage of siege, but the timorous minority who rule France, or who rather prevent it

from being ruled, dare not make a change, even such a just and imperative one as this. The tendency among the elections is still republican, but the parties are as much as ever in the mutual position of the uncles and nieces in the Critic. The Prince Imperial has been reported as about to marry a daughter of the Czar, who has no existence, and the Spanish difficulty is ended by the adoption by the French of greater precaution along the frontier: the tone of Serrano's complaint having been given a proper rebuke, the injuries which called it forth have been remedied.

BISMARCK's happy faculty of throwing his insolence into the scales at the right time, has perhaps been drawn on too far during the last month, and what was to be accomplished by provoking or even in successfully crushing a power like Von Arnim, is not clear to an outsider. Nor is the triumph by any means assured. Fighting the Pope and tramping on Alsace-Lorraine, are a dlfferent matter. How hateful ultramontanism has made itself is shown by nothing more clearly than by the fact that in its struggle with German brutality, we can give it no sympathy. The moral of the Alsace story is among other things to point the indifference, insensibility, or whatever one may chose to call it, of this special period. No soul seems stirred by the wrongs of these wretched provinces. The partition of Poland and the subjugation of Lombardy and Venice, were in their day very differently received. The New York *Herald* draws a comparison as good as most historical parallels between Bismarck's policy and Strafford's "Thorough," and this is about all.

DISGUST with Washington officials has grown on the part of the independent press to be such an old story, and since the election requires so little courage to express, that the fewer words the last revelation is dismissed in the better. Mr. Mullett, whose title, whence bestowed being a problem, is that of Supervising Architect, has been foolish enough to fly into a pet because the new Secretary of the Treasury, who apparently is his superior officer, pressed an inquiry begun by Secretary Richardson, but withdrawn when Mr. Mullett had expressed his dislike for being inquired into. As Charters, having escaped punishment for all the offenses he had committed,

died under an imprisonment for one which did not go beyond an attempt, so the Supervising Architect, having had entirely his own way in the spending of millions in a sphere whither the law which confines expenditures within the limits of an appropriation, evidently did not extend, fell because of his having no reason to give as to the disposal of a few thousands. No one felt enough interest to ask under what authority the gigantic post-office of New York was being erected, or who had the right to lay bare a block in the heart of Philadelphia; but when the office furniture in Washington was irregularly manufactured, Gen. Bristow interfered and the nation lost Mullett. Mr. John McArthur, Jr., of Philadelphia, has been appointed the new government architect, and it would be mere justice to him for Congress to define functions which his predecessor exercised without the slightest regard to law or Congressional action.

THE safe burglary case, which has been dragging its way through the newspapers for months, has come to even a more abortive end than was anticipated. That the jury dishonestly selected, at any rate unfairly constituted, would not condemn the prisoners, every one believed, but it now turns out that as to three of these prisoners (indicted, as our readers know, for a conspiracy to get up a false accusation of burglary against Mr. Alexander, of Washington, obnoxious to a portion of the District of Columbia rulers), the process was invalid, owing to the way in which the grand jury was chosen. The larger rogues will probably escape, and whether the smaller ones can be held is doubtful. The disagreement of the petty jury does not, however, prevent a new trial being had, provided any of the accused can be brought without the sphere of the procedure of the illegal grand jury. In the Beecher matter the public sought refuge in legal proceedings when sickened with an investigating committee; here, however, the only hope is by the converse step.

THE Forty-third Congress has assembled for its second session under circumstances of extraordinary interest. For some reason or other—hard times, inflation, southern interference, or a genuine conversion—as the purpose of this paragraph is a catholic address to the public in general, we leave our readers to take their choice—

the political horizon has brightened for the Democrats. It cannot, therefore, be considered altogether a miracle, that the proceedings in opening both the Senate and the House were less exuberant than usual. There was so much less of hardy assurance on the part of the majority, and so anxious a circumspection on that of the hopeful minority, that all the papers have to tell us is of the style, wind and limb of the war-horses. With the sad tone of Bernard of Clugny, the New York *World* announces a caucus to be held by the Republicans. The correspondent "with one auspicious and one dropping eye," leaves it on the reader's mind that there is to be at least one more caucus in our history. Somewhat farther down, Bernard lets us know that Representative Wood, (Fernando) has invited his friends of the Senate and House to celebrate the Democratic victories at his abode. Probably there will be other of these social gatherings, but none need be expected from Gen. Butler, who, defeated among other things, as he informs us, by his devotion still unchanged to woman, is determined to withdraw from public life and practice his profession.

The stillness of the occasion was varied by the reading of the President's message, to which every one listened attentively, and about which no one at the time seemed to have any opinion. This statement ought to be qualified by the remark that New Jersey has the honor of a Representative who slept through everything but the opening of the Message, and the Pennsylvania Democracy can boast of one who expressed his sublime hostility to the administration by putting a cigar in his mouth, aud his heels on the desk. It is to be hoped that Congress, in the bulk, is of different material, and better fitted to discuss the important questions in store for it. It will not be easy to preserve the reputation of a witenagemote in choosing between the various propositions to legislate the country rich. How hard to decide between the varied charms of Judge Kelley's 3 65-100 convertible bond, and the sublime self-satisfaction of determining how much money the country can spare each month to be burned, or on the other hand, just how much more ought to be issued to move the crops. Then there are to be considered the claims for admiration of the Canutes, who think Congress might as well try to regulate the tides by statute.

There is, in all seriousness, one subject of delicacy and import-

ance to be treated by Congress—the troubles in the Southern States. The President, in his message, has referred the matter to them in most manly style. In the meantime, while he remains the Executive, he promises that the amendments to the constitution, and all legislation thereunder, shall be enforced with vigor, and none can doubt that it is his duty to do so; an unpleasant one, from which he would gladly be relieved, to which end he recommends Congress to inquire narrowly into all alleged outrages, and to ascertain whether and how far they are true.

THE smoke having lifted from the field, we can now approximately measure the extent of the Republican defeat. In the first place no visible effect has been produced upon the President, to whom, possibly without authority, the reports ascribe a number of remarks equally foolish and in bad taste, to the effect that Congress and not he is to blame for the result. Some of this cannot but be bravado, and whether he be conscious of it or not, he will not, in the nature of things, insult us again with such appointments as he tried upon us in the past. The "Civil Rights Bill" is conceded not to have survived the late catastrophe, and the outrages at the South are as worn out as Barrére's Carmagnole. The Republicans at Washington are shown to be bankrupt of their whole stock in trade, and when asked to go into caucus, answer, "What is the use? we agree about nothing." The Democrats, with as little policy or principle, except of an entirely negative kind, as their adversaries, have shown so far, at least, as their New York leaders are concerned, a moderation which would suggest a great reserve of strength, and which has won very general commendation.

THE local elections of Philadelphia, which take place in February, are being prepared for, and another effort to purify them is being made. A committee of fifty-eight, representing the Union League, a committee of the Law Association and the Reform Association, are at work, and the prospect of success is better than pessimists among us are willing to allow. Like all others in this direction, the spasmodic character of the attempt is its chief evidence of weakness. How much, if anything, will be accomplished, cannot now be predicted. That the party

conventions have been postponed, is looked upon as a good sign, showing that a slate has not been ready from the beginning, and that capacity and respectability may have a voice in the nominations.

On the first of January the new Courts of Common Pleas and the new Orphans' Court for Philadelphia open. Hitherto there have been three sets of tribunals—the Supreme Court of the State sitting at *nisi prius* with a very general jurisdiction, both at common law and in equity, over controversies where the amount involved was five hundred dollars or over; the Common Pleas having a general jurisdiction over controversies where the amount involved did not exceed five hundred dollars, and over certain subjects exclusively, as lunacy and divorce; the District Court having a general jurisdiction corresponding to that of the Supreme Court at *nisi prius*, where the amount involved was a hundred dollars or over. The Orphans' Court and the Criminal Courts have been filled by the Judges of the Common Pleas. The former, from the 1st of January, will be a separate court. The latter remains unchanged. After this date the *nisi prius*, except for one or two special subjects, is abolished. The District Court and the Common Pleas are merged, and four new Courts of Common Pleas, with three judges in each, with a prothonotary and calendar of cases in common, and each taking its turn in holding Quarter Sessions and Courts of Oyer and Terminer, but in every other respect independent of each other, will be the result.

There can be no doubt that the New Constitution has provided the means for effectual reforms in the business of the law as it is administered here. The reduction in the number of courts and an increase of the number of judges ought to expedite business and save a great loss incidental to delay in litigation. The next thing to having law made certain is to have it made speedy. The abolition of the excess of court clerks and other officials, and the change from living by fees to salaries, cannot but reduce the immense sums now taken from parties engaged in litigation and the taxpayer, and instead of this indirect encouragement to dishonesty, give us good officers working on their salaries. But all of these reforms would be of little lasting value if law-suits are to be made so cheap that the courts will be flooded with matters of

small amount in value or questions of little importance even to the parties in interest. To prevent this there ought to be such legislation as will give to the new police magistrates a large jurisdiction over matters both civil and criminal, and appeals to the courts ought to be made only upon such terms as to costs as will prevent the wretched spectacle now exhibited of petty suits for debt or two-penny charges of assault and battery, dragged about from an alderman to a judge, with as much consumption of time and money, both of the public and of the parties concerned, as if a man's reputation or liberty were at stake. Yet, with the kind of aldermen now abusing judicial functions, it would be unsafe not to provide escape from their law.

In abolishing the existing system of aldermen,—a relic of a time when offices sought good men and found them—the duty is put upon all parties of selecting very good men for police magistrates. It is not only due to every class of citizens that their causes should be promptly heard and legally settled, but it is due to the public that the time of the judges and the business of the courts should not be weighted down with the cost of cases that are now taken into the civil side of the Common Pleas, where juries are kept for hours listening to learned arguments about sums in dispute from five dollars up to a hundred. A sensible, honest magistrate would settle the question in much less time, and much more to the advantage of the parties in interest. So, too, in the Quarter Sessions, there are lists counting by the hundred, of cases of the most trifling offenses, coming within the purview of the criminal law, in which the learning of the Bench, the eloquence of the District Attorney, and of the lawyers who make that court their special field of display, and the time of the jurymen, are all consumed in trying to find out who struck one of two contending street brawlers, or some other equally vital question. Of course, when the matter of costs is once out of the way, when magistrates, clerks of court, District Attorney and all others are duly paid by salaries, there will be a strong inducement to compel litigants to come to an early settlement of their difficulties; and as we are about to come into the new system of official salaries, we may look forward to very real reforms. The question of good magistrates is therefore bound up with the extent of a reform and increase in their jurisdiction. London, with its three millions of

inhabitants, has both civil and police magistrates with very large powers, and justice is administered by them promptly and satisfactorily. Content with living salaries, devoting their time to the business entrusted to them, rewarded by the confidence of all classes who come before them, aided by fair counsel, there is no reason why here, in Philadelphia, we should not inaugurate a similar system, saving the immense sums now wasted in litigation in court by the parties, and the repeated drafts made on the city treasury, as well as the loss inflicted upon third persons who are summoned as witnesses and jurymen to waste hours and days that would otherwise be devoted to their own business. The whole class of bail-brokers and court-runners would be swept away, and a far-reaching corruption would be at an end forever. Our judges would have all their time left for the business which properly requires their ability, and their courts would dispose of that business to the infinite satisfaction of litigants. How best to secure such legislation, where to procure the draft of such a law as shall meet the evils we have pointed out and provide a suitable remedy, are matters that can best be discussed by the judges themselves, aided by lawyers of ability and experience upon whom they can safely call. The Law Association of this city embraces all the judges and a long list of our foremost lawyers among its members, and they could not do the public a better service than to take the initiative in this matter.

JOHN M. READ, late Chief Justice of the Supreme Court of Pennsylvania, has very recently died. He filled the various and honorable positions of City Solicitor, United States District Attorney, Attorney-General of the State, and for fifteen years that of a Justice of the Supreme Court of this State. He was a very experienced politician, and an early and thorough-going member of the Republican party. In matters of local interest his knowledge was singularly complete and accurate, and his learning as a judge, though not covering a wide field, was, especially in case law, certainly great.

MAYOR HAVEMEYER, of New York, has also died and very suddenly. He was the first Reform mayor, undoubtedly honest, and in many ways capable. He was, however, self-willed and intractable

to an extent which almost undid all the good he tried to accomplish, and when he put back into their offices two corrupt police commissioners, he lost the last remnant of intelligent sympathy on the part of the public, and for his defeat by Governor Dix in an official tussle upon the subject of the commissioners just spoken of, no one was sorry. That he did not ruin the Reform movement in New York, is perhaps the strongest evidence of the vitality of the latter that could have been adduced.

THE First Troop of Philadelphia City Cavalry has just celebrated its centenary. Its first captain was Mr. Abraham Markoe, and just prior to and just after the battles of Trenton and Princeton, it did what was granted at the time as very creditable service. It has for a little while been out in every war since, but as a body has never accomplished much, its members scattering themselves among regiments especially organized for the particular campaign. Its history and good name are however a proper subject for no slight degree of local pride, and should receive that regard which is claimed by the few things connecting us with our past.

SINCE our last number Miss Cushman has taken farewell of the stage, and has received a series of what the newspapers delight in calling "ovations." Though criticism is out of the province of this portion of the magazine, we ask permission for saying a few words, which may do for another to be added to the heap of her garlands.

It is a pleasant thing to see one of Robertson's comedies acted by Marie Wilton's company, but it is a Chinese-like reproduction of every-day life. The jokes are the jokes of the club and of men who read the *Saturday Review*—the sentiment is the sentiment of the people who are rather ashamed to care very much about anything—and the actor is successful in proportion as he can seem to be as impassive as his prototoype would be in good society. The impersonation of such a character as Meg Merriles by Miss Cushman is something different in kind rather than in quality. The art is as consummate, but vastly more difficult. There is an ideal to be formed, as well as to be reproduced—and, when formed, it is a very difficult thing to realize. Consistent as is Miss Cushman's portraiture of the old gypsy, from first to last—impressive

as it still proves to be to the oldest theatre-goers, however used to all the tricks of stage business—every one must recognize how readily, in inferior hands, it would sink into burlesque. It admits of no degree in workmanship. It must either be as it is, perfect of its kind, or it would instantly be rejected of gods and men. From her first swift rush upon the stage to the final fall in the supreme collapse of death, there is no pose, nor look, nor gesture, nor intonation which is not in its way faultless. This completeness it is which distinguishes the work of this great artist. She rested not till it was left without flaw. You may quarrel with the theory upon which she plays Lady Macbeth, for instance; but let her premises be granted, and what she does and is in the part, follows inevitably and of necessity. In no character, however, is the perfection of her skill more absolute than in Meg Merriles, and never has she played it better than on her last evening. Her brief and brilliant engagement has drawn to a close, and she has permanently retired from a pursuit, which is sometimes followed because its labors are a diversion, and the labor we delight in physics pain; but however cordial may be the welcome we shall extend to those coming forward to take her place, we must recognize and admit that her art differs from theirs as the novels of Scott do from those of Trollope—as the outlines of Retsch or the cartoons of Kaulbach from a photograph.

SHALL WE GIVE UP SUNDAY?

THE general civil observance of the first day of the week as a day of rest is one of the national institutions put in peril by the large influx of foreign immigrants, and by the ferment of dissatisfaction with the churches and theologies, who have taken the institution under their patronage. In the city of New York, where foreigners and foreign interests exert an almost preponderating influence, this danger has been especially marked, and the right to devote the day to amusements of every sort is now in dispute between two very large sections of the community—the law being clearly and strongly on the side of those who dispute the

right. The innovation began with concerts of sacred music; then, under the same name, concerts of mixed and even of thoroughly secular music were given; and now it has come to theatres open on Sunday. Against this movement, a large petition to the authorities, signed by many of the wealthiest merchants of the city, and by Lester Wallack, Dion Boucicault, and others of the theatrical fraternity, has been presented, asking for the enforcement of the law.

That this bold defiance of the Sunday laws closely coincide with the victory of the Democratic party in that State, would seem to indicate that its support in repealing the law or in treating it as a dead letter is relied upon. The Democratic party has always been distinguished for large views of individual liberty; a large part of its following consists of the class who regard such laws as an oppression. But we think the hope is a mistaken one. The men recently elected to office in New York, especially the Mayor and Governor, are of the highly respectable, church-going class, and are men with whom the opinion of that class will weigh for much. They will certainly not go out of their way to offend it; and the enforcement of the law is clearly in the line of their duty. At most, they will plead, if the matter be not finally settled before they enter upon office, that they have no choice, and that "the best thing to do with a bad law is to enforce it."

The organs of public opinion are generally with the petitioners, but they nearly all make the mistake of treating the day as a religious or ecclesiastical institution, and taking religious arguments into account. It is from first to last a purely national institution, as was its predecessor, the Jewish Sabbath. The fourth commandment, and indeed the whole ten, were not enjoined upon a church, but a nation, and it is upon social and national grounds that the argument for the legal observance of the day is strongest. The day of rest is needful for the health and sanity of society—more needful in modern than in ancient society—more needful in America than anywhere else in the world—more needful in New York than anywhere else in America. The more rapid and feverish the societary movement, the more needful is this weekly antithesis of rest and quiet. Indeed we might question whether one day in seven is enough. But we think it beyond question that the nation, the commonwealth and the municipality, are any

one of them competent to say through their recognized organs, their respective governments—"We will stop and take breath every seventh day. And as our activities are so interwoven that we can only stop by one and all of us stopping, we will forbid any one not to stop." This agreed to, the question arises as to one or two special classes, whether they are to be exceptional. Society does tolerate such exceptions—milkmen, newsdealers, street-car drivers and conductors, bakers, compositors on Monday newspapers, and others. The true question at issue in New York, is whether the persons employed in places of amusement should form another exception. The best captains of their class in New York say that they should not; and when the exhausting nature of their occupation, the powerlessness of most of them to resist the dictation of greedy managers, and the needlessness of their continuing work, are all taken into account, we think the scale preponderates vastly in favor of enforcing the law against Sunday amusements. Should the law give way on this point, there seems to us simply no line of principle to prevent the restraint being removed in all other cases, and wherever custom or the power of the capitalist is too strong for the individual, the workingman's day of rest will gradually disappear.

THE PIONEER GOVERNMENT OF OREGON.[1]*

THE commencement of settlement and civil government in the country now comprising the Pacific States and Territories, is an interesting subject, and, as time passes on, and we are

[1] Lieber—Civil Liberty and Self-Government. 1st Ed., vol. I., p. 206, and p. 210; and vol. II. p. 21.

"Foreigners frequently express their surprise at the ease with which, in our country, meetings, societies, bodies, communities, and even territories self-constitute and organize themselves," etc., and Mr. Leiber adds in a note, "as a striking instance, may be mentioned the whole procedure of the people of Oregon, when Congress omitted to organize the territory, and ultimately "organic laws" were adopted "uutil such time as the United States of America extend their jurisdiction over it." They were printed by the Senate May 21, 1846, and form a document of great interest to the political philosopher in more than one respect.

* By an early settler.

removed further from the period in which those events occurred, it will command greater regard and excite still deeper interest. California, invested with the magnificence of her inexhaustible treasure, may be said to have sprung at once, perfect and complete, into the sisterhood of States, so brief was her pupilage. It was different with her compeer, Oregon. There was nothing Minerva-like about the birth of her political sovereignty. She was in several ways, and under peculiar circumstances, an independent offspring. The title to the soil, which had been held in joint occupancy by the United States and Great Britain, was only determined in 1846—years, a complete decade at least, after settlements had been commenced within her borders—and she reached her majority only after a full minority of twenty-one years. Not until that length of time from the first manifestations of political significance in her social life did she assume her position as a State in the Union. There were no discoveries of precious metals to attract the world and immigration to her fertile and secluded valleys. Agriculture, the industry of the husbandman, was to make her wealth—the plow to open up her golden harvests. Oregon has experienced three different characters of government First, the pioneer or provisional, afterwards the Territorial, under the jurisdiction of the United States, and now the superior authority of the State. The first was a government as good and sufficient for all practical purposes at the time of its existence, and as much respected, as either of the others. While the public interests were sedulously subserved, the highest regard was manifested for individual rights. The law has been supreme, its majesty held inviolate always in Oregon, since its first enactment by the pioneers. Wise in its simplicity, potent in the measure of justice and right it embodied and maintained, its fundamental principles were the same as those which sustain the jurisprudence of to-day. Twelve years before California became a State, Oregon was maintaining her settlements in the valley of the Willamette. The first Americans who remained permanently in the country, went there with Captain Wyeth, of Boston, in 1832. Their object was to trap, and trade with the natives for peltries. But upon the abandonment of his enterprise by this gentleman, a few years subsequently, a number of his men became settlers. The brothers Lee and others, of the Methodist mission, reached Oregon in 1834.

The Rev. Dr. Whitman and Rev. Mr. Spaulding, of the "American Board of Foreign Missions,' with their wives, arrived in 1836. These ladies were the first white women who crossed the Rocky Mountains, and their children were the first white American children born in the country. The Rev. F. N. Blanchet, now Bishop, with Father Demerse, of the Catholic mission, located there in 1838. The missionaries the world over have been the pioneers. With a love ineffable for their Master's work, and a zeal that the most formidable circumstances have been unable to depress, ready to give up their lives if requisite for the advancement of their holy cause, they press forward, tracking the desert, encountering the perils of disease and savage enmity with invincible fortitude, to extend the blessings of the gospel to the benighted of all lands. What have they not accomplished, apart from their special vocation, for the benefit of the world, in the collection and dissemination of valuable and important information concerning new and unknown countries—as philologers, geographers, geologists, botanists and general historians?

Our purpose in this paper is not to narrate, even partially, the suffering and loss of life incurred in the progress of settlement in Oregon. In this respect it may be sufficient to remark that its history contains a full proportion of the incidents of sacrifice and yielding up of life, akin to martyrdom, usual in reclaiming new and remote sections in an Indian country. Our idea is simply to give a brief account of the process of the formation of civil government on the north Pacific coast. We cannot refrain, nevertheless, from a mere mention here in passing, that after a residence of thirteen years among them, devoted to their education in religion and the useful arts, the estimable Dr. Marcus Whitman and his amiable wife, with others, were murdered, under circumstances of the most revolting cruelty, by the Cayuse Indians, on the 29th of November, 1847. Dr. Whitman did more, perhaps, than any other person to encourage immigration and otherwise forward the interests of the territory wherein he had made his home. His mutilated remains were buried near the place where he fell. No monumental stone records the faithful service and untimely death of a most worthy Christian gentleman.

The first action towards the agreement of any kind of civil rule comprehending the whole community, occurred in February,

1841. It was occasioned by the death of a settler possessed of considerable personal property, who died intestate. There were no human heirs, and no authority to administer upon the estate. It was essential that some proper disposition should be made of the property, which consisted chiefly of bands of horses and cattle. The settlers who attended the funeral held an informal meeting, after the burial, and upon an interchange of views and the appointment of a "committee of arrangements" to take into consideration the whole subject apparently, agreed to meet again on the 17th of the same month. The gathering at Champoeg—a point on the Willamette river, equidistant between the present cities of Salem and Portland—on that date, in the imperfect record left of its proceedings, was called "a meeting of some of the inhabitants of the Willamette Valley for consultation concerning the steps necessary to be taken for the formation of laws, and the election of officers to execute the same, for the better preservation of peace and good order." The business transacted was principally in the nature of an expression of opinion in the recommendation of measures for future action. The "committee of arrangements" made no report and were "advised to propose" the creation of certain offices. The judgment of those present as to who should be elected to fill these offices was manifested in nominating candidates for them.

The meeting adjourned to meet the next day at the Methodist Mission House, which was then located on the right bank of the Willamette river, opposite the present town of Wheatland. This adjourned meeting, on the 18th, was fully attended. The record of it reads, "at a full meeting," etc. The material point to which there was no opposition was the necessity of adopting some kind of laws regulating probate matters. A crude form of government was determined upon. The executive power was dispensed with, or practically intended to be placed in the chief functionary called "Supreme Judge," who was elected by those present. A committee of nine persons were empowered "to form a constitution and draft a code of laws," and report at a subsequent meeting. A "clerk of courts and recorder," a "high sheriff, several justices of the peace and constables" were also elected. "It was then resolved that, until a code of laws be drafted by the legislative committee, and adopted by the people, the Supreme Judge be instructed to act according to the laws

of the State of New York." This public gathering was larger than at any previously held in the colony, and adjourned to meet on the following first Tuesday of June, "at the new building, near the Catholic Church." This effort at government-making certainly was made to run the gauntlet of the influence of these two missionary establishments, which no doubt was opposed to any further perfection of it. At the meeting in June, not so fully attended as the other, the Committee on Constitution and Code of Laws were called upon to report, when it was announced that they had never met to discharge the duties assigned them. Some withdrew from the committee and others were appointed in their places, and they were directed to report at an adjourned meeting in October following. The committee were also "instructed to confer with the commander of the American squadron, and Dr. John McLoughlin, chief factor of the Hudson's Bay Company, with regard to the forming of a constitution and code of laws for this community." The only practical result of this movement appears to have been the disposition of the estate of the deceased party heretofore alluded to, which was reached to the apparent satisfaction of the community. The Legislative Committee, as it was denominated, differed in opinion as to the expediency of establishing a permanent organization, and the settlers also must have entertained adverse views, as the public meeting to receive the report of the committee was never convened. The truth was, the Americans hoped to be provided with a government by authority of Congress, within a reasonable time, in an abrogation of the treaty of joint occupancy and an extension of the jurisdiction of the United States. They were fearful, at least some were, that matters so materially affecting their own immediate interests might be complicated and prejudiced through injudicious action on their part. The population was composed of the two nationalities, the preponderance uncertain perhaps, or at all events not so determinate as the immigrations of the two subsequent years made it.

While the two home governments were seemingly indifferent, and deferring any positive action as to a settlement of the question of ultimate possession and jurisdiction, the "American camels"—the patient and serviceable oxen—with their lengthened lines of wagons, laden with "the household gods," were annually

conveying across the continent, slowly but surely, through dreary deserts and unfriendly tribes of Indians, the inflexible power that was finally to compel an adjustment of the controversy and supplant the achievement of any especial and distinguished statesmanship in its accomplishment.

The next attempt at instituting a government for the communities of Oregon took place two years later, and was crowned with success; and when perfected still two years later, the system of polity presented to the world by the pioneers of the North Pacific, was the admirable work which worthily received the encomiums of our statesmen, and fulfilled the highest purpose of all good government in promoting the happiness and prosperity of the people. For six years this rule of the pioneers continued, popular and efficient, until changed to the territorial organization by act of Congress.

On the 4th of March, 1843, at a meeting of the colony to provide for the protection of the stock of the settlers from the attacks of wild animals, after completing the business in hand, a committee of twelve persons was created "to take into consideration the propriety of taking measures for the civil and military protection of the colony." At the call of this committee the people assembled at Champoeg on the 2d of May, when the report in favor of organizing a government was adopted. In accordance with the recommendations of the committee, a supreme judge, with probate powers, was elected; also, a clerk, a recorder, treasurer, sheriff, justices of the peace, constables, etc. Nine persons were selected to frame laws, and instructed to report on the following 5th of July. It was agreed to pay them one dollar and twenty-five cents each per day, "the money to be raised by subscription;" and it was raised, the members of the committee subscribing more than the amount of their compensation. The organic and other laws thus prepared were submitted to the people, in mass meeting at Champoeg, on the 5th of July, 1843, and approved after some slight amendment. The fundamental law, or "Articles of Compact," as they were termed, guaranteed the freedom of religious belief, the writ of habeas corpus, trial by jury, "proportionate representation," the maintenance of "good faith" with the Indians, providing for legislation "to prevent injustice being done to them," and for the preservation of peace and friendship. Slav-

ery was prohibited. The executive power was vested in a committee of three persons, to be elected annually. The legislative power was lodged in a committee of nine persons, to be styled "Legislative Committee," and chosen each year. The judicial power was placed in a supreme, probate and justices' courts, the first to consist of a supreme judge and two justices of the peace. Provision was made for the election, every year, of other necessary officers. The right of suffrage and to hold office was given to "every free male descendant of a white man," twenty-one years of age and upwards, inhabiting the territory at the time of its organization, and to others after a six months' residence. Among the enactments put in force on this occasion were laws for the organization of the militia, and the possession and improvement of lands, and certain laws of Iowa Territory, which were designated. The country was divided into four districts, instead of counties, called respectively Tualatin, Yamhill, Clackamas, Champoeg, and only comprised the section south of the Columbia river. It was decided "to designate these districts by the name of Oregon Territory." It was also determined that the expenses of the government should be paid by voluntary subscription instead of taxation, and in the form designed for this purpose it was provided "that in all cases each individual subscriber may at any time withdraw his name from said subscription, upon paying all arrearages and notifying the treasurer of the colony of such desire to withdraw." Taxation was resorted to, however, the ensuing year, when a tax of one-eighth of one per cent. was levied. Before the dissolution of this convention of the people, Alanson Beers, David Hill and Joseph Gale, all Americans, were elected by ballot to serve as Executive Committee. The first was a blacksmith attached to the Methodist mission, the second a farmer, the third had been a settler since 1834, and had commanded the first Oregon-built seagoing vessel, called the "Star," in a trip to *Yerba Buena*, now San Francisco, in 1841. They were good, honest, practical men, and respected by the community. The other officers elected at the previous meeting were authorized to qualify and enter upon their respective positions. The oath of office was then administered to the members of the Executive by the president of the convention, who was directed also to qualify the supreme judge. At the annual election on the 2d of May, 1844, new executive and

legislative committees were chosen; the latter body held two sessions, revised the laws, and otherwise did considerable needed legislation, and submitted a series of amendments to the "Articles of Compact."

On the 26th of July, 1845, important additions perfecting the organic laws were ratified by a vote of the people. The boundaries of the territory had been extended so as to include all north of the Columbia river to the parallel of 54° 40'. The executive power had been transferred to a governor, with the usual powers of such a functionary. The legislative authority was changed to a House of Representatives of not more than sixty-one members. In the Judicial Department, the right was given to create district and other inferior courts, as they were required, and the supreme court was re-arranged and made to consist of one judge, to hold two terms a year. The rights in reference to holding and improving lands, were more distinctly defined and made a part of the organic laws. George Abernethy was elected governor, and held that office by annual election thereafter for four years, until superseded, March 3, 1849, by General Joseph Lane, appointed governor by President Polk. Governor Abernethy, an intelligent Christian gentleman, unassuming, indisposed to court popular favor, with strong common sense, and a desire to do his duty conscientiously and quietly, was the right man for the occasion, and, whatever prejudice may assert to the contrary, it was fortunate for the colony that just such a person could be had to fill the highest and most responsible position in the pioneer government. It must be remembered that the population was of a mixed character, being composed of Americans, English, Canadians and half-breeds. This was the form of oath taken by the officials of the Territory: "I do solemnly swear that I will support the organic laws of the provisional government of Oregon, so far as said organic laws are consistent with my duties as a citizen of the United States, or a subject of Great Britain, and faithfully demean myself in office. So help me God." It was requisite to exercise great prudence in the management of affairs, that national prejudices might not be excited to the disruption of the cordial relations existing, and necessary to be maintained in the successful conduct of the government.

Civil authority in Oregon may be said to have assumed a per-

manent and dignified character from the assumption of the administration of affairs by Gov. Abernethy, and the judicious and efficient legislation which ensued on the part of the people's representatives. The general acceptance, if not the unanimous approval, of the provisional government, by the settlers of all classes, regardless of their attachments to the forms of home governments, made it strong and maintained its jurisdiction. Under it life and property were protected. Schools, institutions and churches flourished. The community was prosperous and happy. Contracts were maintained and the collection of debts enforced. Specie being scarce, wheat was made a legal tender in the payment of all demands. War was vigorously and successfully prosecuted. In the winter of 1847 and 1848, and the succeeding spring, three hundred and fifty men were kept in the field, east of the Cascade Mountains, in offensive operations against the Cayuse Indians. In thirteen days from the receipt of the information at the seat of government, Oregon City, of the massacre of the missionaries and immigrants at Wa-il-at-pu, a force of fifty armed men were in possession of the mission station at the Dalles of the Columbia river, the key of the position, having marched a distance of one hundred and fifty miles. It will be borne in mind that there were no steam facilities for travel and transportation in those days, and that this march was made in the inclement month of December. The legislature, then in session, authorized the governor to organize a force of five hundred mounted volunteers; only about two-thirds of this number, however, were actually enrolled. As fast as the companies could be equipped they moved to the front by the old pack trail up the Columbia. The two fights at the canyon of the Des Chutes, in which the enemy were driven each time with loss, occurred on the last two days of February. The battle of Umatilla, where the enemy were again repulsed with serious loss, was fought on the 2d of March. On the 4th the advance of the column occupied Wa-il-at-pu, Whitman's Mission, now Wallawalla, three hundred miles away from the seat of government and almost the same distance from any settlement of note. Commissioners accompanied the troops, authorized to treat with the various tribes to prevent their alliance with the Cayuses, in which they succeeded—the steady

advance of the volunteers, and the sharp and decisive fighting, proving effectual.

All this was a surprising display of energy and power, and would be regarded as remarkable in the operations of any government; but in one so new and inexperienced as that of the pioneers of Oregon, it must be proof eminently satisfactory as to the ability and efficiency of it; that it was not one only in name, but a government founded in the esteem and sustained by the will and majesty of the people. The highest compliment has been paid to the integrity and patriotism of those Americans who really created and administered this early organization, in the simple circumstance that the greater part of those of foreign birth who shared with them the fortunes of that government, as soon as an opportunity was afforded became citizens of the United States. It is indicative of the good faith and honest dealing which had characterized the association. The coming generations, who are to build up the State of Oregon to a scale competing with the grandeur and power of other states, will the more and more appreciate the work of their pioneers, as in the performance of that duty glimpses after glimpses of the grand future are disclosed. The highest regard will be cherished for them when they shall have passed away, to live again in the grateful stories of the thrilling incidents of frontier and wilderness life. Few deeds will be found within the period of that pioneer rule which any one will care to have disclaimed, or which will cause the least reproach. The Oregon pioneers were a class of men possessing the superior virtues which make a superior manhood. Already they have been distinguished by the highest honors—in the pulpit, on the bench, at the bar, as governors, as congressmen, as senators. They did their work unostentatiously, but did it well, in leaving a broad and substantial foundation, at least, for the more complete and perfect work of those who were to come after them.

Portland, Oregon, March 1, 1874. GEO. L. CURRY.

MINIATURE PAINTING.

THE subject of Miniature Painting is one which cannot perhaps be treated satisfactorily within the limits of a short paper, and yet it is one of so much interest, and so instructive in the history and principles of the purest forms of art, that even a brief consideration will be a source of profit and pleasure. For miniature painting, more perhaps than most forms of art-work, strongly appeals to the finer feelings of our nature. It carries us back in imagination to the humble cells of the monks of mediæval times, where, day after day, year after year, and even lifetime after lifetime, the faithful artists pour out the whole earnestness and piety of their nature in the work of enriching the pages of the Missal and the Breviary; and it recalls, in later times, when the purposes of the art were changed, the triumph of the gifted artist, whose skill and patient labor is able to produce for others tiny pictures, on little bits of ivory, which will be enduring recollections not only of the features but of the characters also of those they love. Much pleasing romance, too, there is, gathered around the history of miniature painting, and much that would furnish perhaps more entertaining matter for a paper than this will promise; but our present purpose is rather to look for a moment into the history of this beautiful art, to note its effect upon the rise and progress of the art of painting, and to recall the names of a few of those who have been the most successful in such work in Europe and in our own country. And in these days of hurried work and labor-saving inventions, when a good photographer and an indifferent artist, or the latter alone, will, for a trifling sum and upon a week's notice, produce a portrait or a copy of the work of an old master sufficiently satisfactory to the average mind and taste, it is worth our while to pause, and justly admire the work of the *pre-photographic* days, when the best of artists were willing to expend their time and abilities generously upon such work, and our grandfathers and grandmothers were glad to pay them well for such valuable treasures of art.

In tracing the origin of miniature painting, we are carried back to the earliest periods in which art in any form was known. For we are told that the ancient Egyptians were in the habit of adorning

their papyri with miniature paintings of hieroglyphics; and Pliny tells us that a similar art was practiced in the early days of Greece and Rome. And that it was still existing in the earlier period of the Christian era is evidenced by the fact that there are still preserved two specimens at least of manuscript illuminations probably of the 4th or 5th century: a fragment of a Virgil (which, although a fragment, contains 50 miniatures) in the Vatican, and a portion of a copy of Homer in the Ambrosian Library at Milan.

But it was in the middle ages, from the 8th to the end of the 14th century, that this art reached its perfect development; for during that period, in nearly all the religious houses, the monks spent much time in its careful study, and in the patient labor of illuminating their manuscripts of the sacred volumes and copies of the works of the classical authors. They were called *illuminatori*, and from the fact that the initial letter of a chapter or a paragraph was painted in *red*, the pigment for which was the Latin *minium*, or red lead, they acquired the name of *miniotori*, from which our word *miniature* is formed. Curiously enough, therefore, this word, which always conveys now the idea of *smallness* or *minuteness*, and which we have adopted as an adjective also to express the same idea, comes directly from a word which did not in any way indicate the size of the picture, but only the color of the initial letter which, with its ornamentation, furnished the border or frame in which the picture was set.

It would be impossible to say too much in praise of the work of these "miniatori" of the Middle Ages. All over Europe—in Italy, France, Germany, the Low Countries, Spain, and England, this beautiful art was assiduously studied, and with wonderful results; and those who have seen the superb examples preserved in the many collections of the manuscript illuminations of these old artists find it difficult to say in what country the finest were produced. And it is impossible to over-estimate, too, the value of this work in preserving and supplying valuable material for the development of the art of painting throughout the world. These little paintings, the results of earnest thought and patient, painstaking care in the cloister and the cell, furnished the "*studies*" for those great masterpieces, on panel, on wall, and on canvas, which mark a golden age in the Art of Painting.

With the invention of printing, miniature painting, in the form

it had thus far taken, practically disappeared, and in modern times it has been confined almost entirely to the production of portraits. In this direction, too, it has played an important part in the history of art, by teaching faithful accuracy of drawing and delicacy of expression, and serving at the same time, more than any other department of painting, to produce and preserve a succession of portraits, more or less faithful, of men and women noted in history.

In France we find a succession of eminent artists devoting themselves exclusively, almost, to this department of art. Among the more recent of these the most prominent are Augustin and Isabey. To Augustin especially, modern miniature painting is indebted perhaps more than to any one else; for not only did he apply himself faithfully for a period of more than forty years to the production of a series of "correctly drawn, highly finished, and finely colored portraits," as Gabet describes them, but established in Paris, and taught for many years, a school of painting, at which many of the best miniature painters of the present day were educated. Isabey was a pupil of David, and intended for a historical painter; but he abandoned that pursuit early in life, and devoted himself entirely to miniature painting. An art critic says of him: "He is the only artist who can compare with Augustin; if the latter possessed more strength and warmth of color, Isabey has greater delicacy and softness."

In England we find almost a continuous line of distinguished miniature painters, extending from the early part of the 16th century down to the present time. The famous Hans Holbein, who did so much for England in the way of portrait painting, was sent, the historian tells us, with a letter to Sir Thomas More. The good Lord Chancellor was so much pleased with him and with his work, that he persuaded him to establish himself at his house; and while there Holbein painted several pictures, with which the hall of the house was adorned. Sir Thomas wishing him to be presented to the King, adopted the simple but effective plan of inviting the King to his house to a banquet, and when there, His Majesty was so much pleased with what he saw, that he carried off both pictures and artist, and gave them quarters in the palace, where Holbein remained, in very comfortable circumstances apparently, for many years. Although Holbein painted

but little in miniature, yet that little was enough to draw out of his goldsmith's shop at Exeter Nicholas Hilliard, who, beginning with the study of Holbein's designs, soon became famous as a miniaturist, and was appointed court portrait painter to Queen Elizabeth. Then followed Isaac Oliver, a pupil of Hilliard, of whom it is said: "He has hardly been surpassed by any artist of any country," and he left as a worthy successor in his art, his son, Peter Oliver. He and his cotemporary, John Hoskins, were the famous miniature painters of Charles I.'s time. Hoskins' pupil, Samuel Cooper, was noted as the artist who painted the portraits of Oliver Cromwell and John Milton, and Spooner says of him: "He was the first artist of his country who gave a strength and freedom to miniature painting; his coloring was pure, his carnations were beautiful, and the hair was painted in a flowing, elegant manner." Then followed Flatman, Gibson, Cosway, and others, until we come, by an easy transition, to that part of our subject which is perhaps of more immediate interest to us now—the miniature painters of our own country. Foremost of these, without doubt, and equal perhaps to any of his cotemporaries in Europe, is Malbone, many of whose paintings we have among us. He was born in Newport, Rhode Island, in the latter part of the last century, and lived there at a time when that old city was a centre of great culture and refinement. Oddly enough, the first real exhibition of his talent was in painting a scene for the theatre in Newport when a boy, and the next exhibition we have of it is in his exquisitely painted miniature portraits. No more graceful criticism upon the value of his paintings can be given than in the words of his very dear friend, Washington Allston, a man whose pen was as graceful as his pencil. "He had the happy talent," he says, "among his other excellencies, of elevating the character, without impairing the likeness. This was remarkable in his *male* heads, and no woman ever lost beauty under his hand. To this he added a grace of execution all his own."

The intimate friend of Malbone in early life, Charles Fraser, of South Carolina, was much noted as a miniature painter. Almost every person of note in his native State, for a period of more than fifty years, was the subject of his portraiture. George Catlin, a Philadelphian, chiefly noted for his studies of the manners and customs of the Indian tribes of North America and his portraiture

of their chiefs, was a miniaturist of great merit; and Henry Inman, also, of New York, whose excellent portraits in oil are so well known and so much admired, sometimes painted miniature portraits, which are greatly prized. But the best known of the miniature painters of our own city are the Peales, father and son, the latter especially having been engaged in work of this kind during nearly half a century. He devoted very much time and careful study to the production of faithful portraits of Washington from life studies.

Within the past few years the camera of the photographer has dealt a blow to miniature painting somewhat similar to that which it received from the printing-press several hundred years ago. But so long as art is anything more than mere imitation, the occupation of the portrait painter will not be gone. He may call photography to his aid to gain accuracy of drawing and correctness of proportion, but there remains always to be done that which cannot be the work of a machine, but of the gifted artist only, to throw into the portrait the expression of character and of intelligent life.

A word, before concluding, as to the method of work in this art. Strictly speaking, miniature painting includes only water color painting on vellum or ivory. And yet there is an important distinction between the method of painting known as "*guache*," and the true aquarelle. The first of these is the method adopted in work upon vellum, such as the richly illuminated manuscripts of the Middle Ages, of which we have spoken. The colors are ground in water, and diluted with gum water mixed with white, so that, in such painting, there may be a colored back-ground; the lights are put on in successive layers, and the artist covers the whole surface of his picture. In Aquarelle, on the other hand, the white of the back-ground is reserved for the lights of the picture. For this, ivory has been found to be the best kind of material on which to work, possessing a transparency of texture, and producing a peculiar softness of effect in the painting, especially in the carnations. The back is always protected by something as perfectly white as possible, for anything dark would show through it. Usually the piece of ivory is quite small, such as can ordinarily be obtained; but when larger pieces are required, the elephant's tusk is sawed around its

circumference, and the ivory steamed and flattened by powerful pressure, and then mounted for use. In this way plates have been obtained as large as 18x20 inches.

We cannot, in conclusion, better state the true character and correct work of miniature painting than in the language of M. Blanc in his delightful book "La Grammaire des Arts du Dessin." If art were a simple imitation of the true, every representation in miniature would be proscribed, because it implies a contradiction between the distance the smallness of the image supposes, and the careful finish that destroys the idea of the distance. Happily art is something besides imitation of the real; it is a beautiful fiction which gives us the *mirage* of truth, upon condition that our soul shall be the accomplice of the falsehood. It is an error, then, to suppose that the miniature painter should treat his little figures as if they were sunk in the picture, separated from us by successive layers of atmosphere, and that he ought to make them seem afar off by reason of light and aërial color. Nothing would be more insipid than a vaporous execution that would allow what we hold in our hands to vanish from our eyes. Taste counsels happy trickeries which strongly interest us in the essential features, leaving the rest out of sight. Upon the ivory of the miniaturist, as well as the intaglio or cameo of the engraver, art ought to express much with little. Since the artist must insist upon that upon which expression depends, let him content himself by "putting in evidence" the great features and gliding over the rest; he will exclude all that is useless, but in compensation will strongly express what is decisive."

S. WAGNER, JR.

VIOLLET-LE-DUC.

All travelers on the continent of Europe who appreciate mediæval architecture, must have been forcibly struck by the contrast between the restorations of Gothic churches in France and those in any other country. In Italy the loftiest idea of a restoration is a coat of whitewash on the interior, and all lovers of art know how many glorious church-frescoes have been injured by the process. Whenever it is possible to do so, the Italian restorer adds some peculiarly inappropriate Italian renaissance features to both

exterior and interior, as has been done in the Milan cathedral, notably in the western façade. In France, on the contrary, the restorations have been generally conducted with admirable taste and skill, and it is hardly too much to say that this is all due to the efforts of the greatest living architect, M. Viollet-le-Duc.

Eugène-Emanuel Viollet-le-Duc was born in Paris in 1814, and as he has always been both a hard and systematic worker, he probably has still many years of usefulness before him. He has devoted his whole life to the study of the ecclesiastical, civil and military architecture of the middle ages. From 1836 to 1837 he studied in Italy and Sicily the remains of Greek and Roman art, especially at Rome and at Taormina; but with these exceptions his studies have been almost confined to mediæval architecture, and especially to the noble examples afforded by his own country. He has given us sketches and studies of the principal monuments of Sens, Carcassonne, Toulouse, and many other French towns. In 1840 he was made inspector of the works of the Saint-Chapelle, with M. Lassus, and he has ever since been occupied with the restoration of ancient buildings in every part of France.

As the result of a competition in 1845 he was charged, in concert with Lassus, with the restoration of Notre Dame de Paris, and with the construction of a new sacristy. He completed this restoration in 1856, with the polychromatic decoration of the interior.

In 1846 he was chosen the architect of the Abbey of Saint-Denis, the restoration of which is, at this time, almost completed.

In 1849 he undertook the restoration of those wonderful mediæval fortifications at Carcassonne, and the same year he began the restoration of the noble Cathedral of Amiens. In 1853 he was made one of the three Inspectors General, charged with the administration "*des cultes du service diocésain en France*," and he conducted or directed among other restorations those of the church of Notre Dame de Châlons-sur-Marne, of the Cathedral of Laon (the interior of which is possibly the finest in the world), and of the Château of Pierrefonds. Mr. Charles Wethered has given an excellent description of the work at Pierrefonds, and a very interesting sketch of Viollet-le-Duc.[1]

[1] See letters on the "Restoration of Historical Monuments in France." *Times* (London), August 25, 1874.

Mr. Wethered says: "The Château of Pierrefonds, built originally by Louis, Duke of Orleans, one of the most powerful nobles in Europe at the close of the fourteenth century, is a faithful reproduction of one of the finest mediæval structures in the world. It is a majestic feudal castle without and a magnificent palace within. I know nothing that conforms better to Ruskin's cardinal principle of breadth in well-building—breadth in everything—solid stone, broad sunshine, starless shade! The partial rebuilding of it has employed a thousand men for twelve years."

At the end of 1863 Viollet-le-Duc was made Professor of the History of Art and Æsthetics in the reorganized Ecole des Beaux-Arts, which position he occupied only for a year.

"Viollet-le-Duc's pen has been as prolific as his pencil. In his published works we find a masterly and comprehensive survey of various provinces of art not obtainable elsewhere. With a rare capacity for acquiring and assimilating a knowledge of the history of all nations and epochs, he has shown, along with other searchers in the same wide field of inquiry, that the most authentic evidence of the social and political condition of countries is that reflected in their arts, and above all in the 'magnificently human art of architecture.' In the case of France they form an unbroken chain of historical landmarks, whose links connect the ancient world with the modern—the abiding witnesses of the triumphs and tragedies of a great and gifted people, who have exercised a mightier and more continuous influence over the affairs of Europe than any other nation since the fall of the Roman Empire. Her ample series of documents in stone in themselves go far to ratify the recent assertion of an able Edinburgh reviewer, that 'the grandest of all national histories is that of France.'

"Individually, Viollet-le-Duc is an intellectual king among men, with personal attractions of dignity and grace befitting a descendant of the old *noblesse*. I have never seen a nobler head, or a countenance more expressive of mental power. He comprises the seriousness and solidity of the English character with the *verve* and *esprit* of the French temperament. Most of us, I suppose, accept to the full Carlyle's helpful doctrine of hero-worship—of loyal recognition of honored chiefs in every leading sphere of human thought and action; and here we have a notable living example of the hero as artist, as poet or seer, who speaks to us for

our instruction and delight, not only in the printed volume, but in the still more fascinating language of form and color. He approaches truth on its æsthetic side, and his doings are the record of its perception and embodiment in outward visible shape. The thousands who work under him, and catch some of his spirit, may well look up to such a man with sincere admiration and respect. One of his principal employés said to us with hearty enthusiasm, 'He knows everything—from astronomy and geography down to cookery—and it all comes like music from his lips.'

"In his numerous executed works, whether original or derivative, everything, as his friend Mr. Ruskin would say, 'is fitted to a place and subordinated to a purpose,' imparting to all he does that sense of satisfaction which we feel when contemplating the higher results of artistic unity and completeness. He is not less successful in the representation of ideal thought and sentiment than in the rendering of direct, specific fact. He never repeats himself, and nothing can stale his infinite variety—from the delicate aërial lines, woven as if by fairy work, of the aspiring *fleche* which so gracefully crowns the cathedral of Notre Dame, to the grand simplicity and aptness of every detail in his own house at Paris.

"In the course of our trip I learnt from my friend something of the daily routine of life and study by which this eminent man has been able to accomplish so much fine and enduring work, which perhaps may not be unprofitably recounted in an age of luxury and ease as a pattern for the guidance and well-doing of others. He enters his studio at seven in the morning, where he is engaged till nine in getting in readiness the work that will be called for, and preparing for his visitors, whom he receives from nine till ten, during which he takes his frugal breakfast standing. At this hour will be found awaiting the manuscript for the publisher, a pile of wood blocks for the engraver—who has only to follow the cut between the sharp lines of the finished drawings which cover them—plans for the builder, designs for the sculptor and blacksmith, and cartoons for the decorator or glass-painter—every one of which is the product of his own hand. For each of his staff as he arrives, after his '*Voilà Monsieur votre affaire*,' and verbal instructions, he has a kind word of friendly enquiry, encouragement or advice. At ten his studio is closed,

and he works at his drawings without interruption until his dinner hour at six. At seven he retires to his library, where he is engaged with his literary pursuits till midnight. This, his daily life at home, is but little varied when away. He generally travels by night, often taking journeys of several hundred miles; for he visits every building upon which he is engaged once a month, making any special drawing required upon the spot. He gives his instructions personally to the workmen, each of whom he notices in making his round of inspection. Though he has himself a perfect acquaintance with the technicalities of every craft, he does not disdain to consult their opinion, and he can, so we are assured by the men themselves, always teach something worth knowing belonging to the practical department of each. He will take the hammer and pincers of the plumber and show him how to beat or twist his lead to the required form, or the chisel from the sculptor, and with a few strokes gain for him the desired expression. He gives a perspective detail of every drawing, however small, and his designs for sculpture and goldsmith's work are drawn with photographic accuracy. His most accomplished sculptors say that it is impossible for them to render all the *finesse* of his delineations. And these beautiful sketches come from his hands by thousands; those forming the exquisite illustrations which adorn the published works would of themselves bear testimony to a life of rare industry and skill. But the most surprising thing of all is that he works entirely alone, unaided by clerks or assistants of any kind. As a proof of his remarkable powers, there is an instance, the truth of which I can vouch for.

"By the cession of Nice and Savoy, France got possession of a considerable portion of the Alpine region. No maps, other than the vaguest and most inaccurate, existed of this new territory.

"At the request of the French Government, Viollet-le-Duc undertook to survey and map it. For this purpose he spent the months of July and August of 1873 among the mountains, and there, unaccompanied and unaided, during that short space of time, by means of his observations, sketches, and wonderful memory, he made himself so perfectly acquainted with the topography of the whole district that, to use his own words, he knew the ground as well as if he had made it. Within another two months, after his return home, he had drawn to a large scale

three accurate and beautiful maps of the French Alps—*a carte à vue d'oiseau*, which shows the mountains, the snow, the glaciers, the rocks and the very moraines, as they would appear to the eye from a balloon; a *carte géologique*, which exhibits the formation of the hills, even to the very crystallization of the rocks; and a *carte routière*, on which is faithfully delineated every track, stream, crevasse, chalet, or other object which can guide the tourist, who, with this map in his hand, may find his way alone throughout the mountains. These maps, which have won the warm praise of members of the French Academy and other *savants*, will occupy two of the most expert engravers of Paris at least a score of months to execute in a form for publication worthy of the originals. This is not all. During the evenings of those two months passed in the mountains, he wrote and illustrated one of the most instructive of his smaller books, an English translation of which, I am happy to hear, is about to appear, entitled, 'How to Build a House.'[2]

"He is regarded as a high authority on the subject of modern, as well as of feudal, military engineering; and a treatise of his, now in press, *L'Histoire d'une Forteresse*, which describes how a fort should be built, will doubtless contain much theoretical and practical information on that important branch of the science of war. During the siege of Paris no officer of the engineers was more actively engaged or more skillfully contributed to the defence of the city.

"In his construction generally, Viollet-le-Duc employs and combines the various modern materials with a scientific knowledge and artistic feeling unapproached by any one engineer or architect of our own day. He is becoming in France the veritable founder of a new school of architecture. Though based on careful study and analysis of the ancient schools, it is not a mere revival or copy of what has been before, but a faithful expression of our present requirements and means.

"He brings into harmonious conjunction those vital elements and immutable principles of art which belonged alike to the Greek of the time of Pericles and to the masters of the Middle Ages. The

[2]Republished by Messrs. James R. Osgood & Co., under the title of "The Story of a House." Translated by George M. Towle. Illustrated by the Author. Pp. 284. Large octavo, $5. A cheaper edition is in press.

more they are studied, the more I am convinced it will be seen and felt that the achievements of this celebrated Frenchman in the associated arts of Architecture, Sculpture, and Painting, are not less remarkable for their catholicity of range than for the beauty of their design and mastery of execution.

"Having myself derived mental health, pleasure, and profit from devoting a country doctor's short holiday to their inspection, my object in making these notes will be fully served if they should in any way be the means of prompting others to more thoroughly investigate works whose fame will be for ever identified with the historic buildings it has been their restorer's happy fortune to hand over to posterity in a state of renovated completeness, not unworthy of their original nobleness and grace."

In the course of his numerous works, M. Viollet-le-Duc has completed his first researches in the art of the Middle Ages, and has gathered together an immense amount of materials, and these he has grouped in a number of works, the most important of which is the "*Dictionnaire raisonné de l'architecture française de XI^e^ au XVI^e^ siècle* (1853–1868)," without doubt the most complete and the best work on architecture ever published.[3] He has also published a *Dictionnaire du mobilier français. de l'époque carlovingienne à la Renaissance* (1855), and an *Essai sur l'architecture militaire au moyen âge* (1854), but both of these works are only developments of his great Dictionary. In 1860 he contributed to the *Moniteur* a series of "Letters on Sicily," afterwards published in book form, and from 1858 to 1868 he brought out a series of "*Entretiens sur l'architecture.*" (In 14 parts, 8vo.)[4]

In 1862 he published in conjunction with MM. Ferdinand Denis and Charnay, a splendid work: *Cités et ruines Américaines.* (8vo. with atlas and photographs.) Finally he undertook in 1866, with M. Ouradon, a work entitled: *Chapelles de Notre Dame de Paris* (1867–1868: 20 parts in folio, with plates).

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[3] A. Morel & Cie. Paris, 9 vols., 8vo.

Messrs. Jas. R. Osgood & Co. have now in press a translation of this magnificent work, which will be enjoyed not only by the professional, but by the general reader as well.

[4] Messrs. Osgood have now in press a translation of this work, under the title of "Discourses on Architecture." It has been translated by that very competent architect, Mr. Henry Van Brunt, of Boston.

As an artist or writer, he shows an especial and exclusive sympathy for the Middle Ages. As artist, he obtained the 3d medal in 1834, the 2d in 1838, and the 1st in 1855.[5]

THE PARTHENON.

Leaden and murky the dark morn dawns on the City of Pallas,
Saddened with mist-like rain drizzling in tiniest drops.
Over Pentilican sculptures it fashions a glimmering network,
Spreading its weft upon frieze, column and shattered relief.
Slowly the ochreous time-stained hues of the shaft, with the white rents
Riven by Latin and Turk, lapse into shadowy gray.
Fitfully comes from the sea and the dim blue islands the storm-wind,
Chasing in squadrons the leaves stripped from the quivering trees.
Moslem, Apostate and Frank who achieved this work of destruction,
Each in his turn I arraign, holding them Vandals alike.
Othman and Latin, alike I accuse you: for here I am Pagan,
Worshipping Beauty and Art e'en in their ruin and death;
Ye who chased from her temple the blue-eyed Pallas Athené,
Goddess of wisdom and art, virtue and lofty emprize,
Ye who traced on her walls yon limnings of saint and confessor—
Ghost-like outlines now, fading, disfigured and vague:
Ye who crooned in her fane your "*Chaire anympheute Nymphe, Aspile Parthene.*" Nay, why did you alter her name,
Worshiping ever a Virgin? Ye of the crescent and sabre,
Ye who a minaret reared, blind to the marvels of art,
Ye whose whitening skulls intermingled with shivers of triglyphs,
Friezes and statues you crushed, grin in disconsolate heaps:

[5] His brother Alexandre (born in Paris in 1817), is known as a landscape painter, and has frequently exhibited in the *Salons* since 1837. See the *Dictionnaire universel des contemporains, par G. Vapereau. Paris. Hachette et Cie.* 1870.

Minions of Venice, who sacked and destroyed while feigning to rescue;
Treacherous Briton, who stole trophies for gazers to scan,
Why did you spare us the beauty divine of the sea and the mountains,
Beauty unchanging and pure, gracing the scene as of old?
Pausing for answer, I hear but the woe-fraught voice of the raven,
Poised on the blast, and the owl housed in the clefts of the wall.
Down in the City a white-beard prelate in satin and tinsel,
Under a vault-like dome decked with portrayals of saints,
Drones his monotonous cantique, his "*Chaire anympheute Nymphe.*"
Choristers shriek in response "*Aspile Parthene.*" Which?

J. G. Brinckle.

THE VOYAGES OF THE ZENOS.

AMONG the documents which support the various rival pretensions to priority in the discovery of America, is a short account of certain voyages made in the North Atlantic, about the close of the fourteenth century, by two Venetian brothers, Nicolò and Antonio Zeno, in the course of which, it is claimed, they at different times visited Greenland, and one of them, Antonio, received information concerning certain large countries lying to the southward, and actually reached the coast of an island, thought by some to have been Newfoundland. The account of these voyages was first published by Marcolini, a noted bookseller of Venice, in 1558—more than a century and a half after they are said to have taken place—and is believed to have been written by a second Nicolò Zeno, a descendant of one of the brothers, who professes to have compiled the story from original letters written, one by Nicolò to Antonio, and others by Antonio to a third brother, Carlo, a very distinguished man in Venetian affairs. The writer tells us that these letters fell into his hands when he was a mere child, and, the value of their contents being unknown, were unfortunately in part destroyed. When, upon recognizing their importance at a later period, he undertook to compose from them

a connected narrative, he found in them allusions to a map illustrative of the voyages, and upon instituting a search, was fortunate in discovering it in the palace of the Zenos, although in a very dilapidated condition. Of this map he prepared a copy which he published with the narrative.

A story constructed out of such fragmentary materials, to assume the facts to have been as here stated, must necessarily be incomplete, and could hardly fail to abound in errors, due either to the writer's mistaken interpretation of obscure statements in his original manuscripts or to his misguided attempts to supply from other sources their numerous *lacunæ*. In fact there are particular passages in the Zeno narrative which no amount of explanation can free from the imputation of being sheer fable, and there are likewise geographical blunders, particularly in the map, such as it seems impossible to believe could have been made by any one who had ever sailed the Northern seas; yet as an offset to these inaccuracies, we meet with correct details respecting places and customs which have unquestionably proceeded from an eye-witness, and which have generally been thought to display information regarding these regions inaccessible in the south of Europe even in the middle of the sixteenth century. This mixed character of the narrative long rendered it an enigma to geographers and antiquaries, and probably there is no other similar document of equal length and importance whose claims to credence have been so often and so earnestly discussed.

About the beginning of the present century, to go no farther back, the credibility of the Zeno story was a standing subject for discussion in the antiquarian world, and one upon which opinions were nearly equally divided. Among those who accepted the story may be named John Reinhold Forster, the distinguished companion of Captain Cook, who published it, accompanied by a dissertation, in his "History of the Voyages and Discoveries in the North;" Eggers, who advocated it in his prize essay on "The Site of the Old East Greenland;" and Cardinal Zurla, who wrote a lengthy volume in its support. It was accepted by the celebrated geographer, Malte Brun; and the illustrious A. Von Humboldt was likewise inclined to view it favorably, admitting the difficulties which surround the story, but observing, as an argument in its favor of no little weight, that "it is straightforward,

and contains detailed descriptions of objects of which nothing in Europe could have given the idea." (On y trouve de la candeur et des descriptions détaillées d'objets, dont rien en l'Europe ne pouvoit leur avoir donné l'idée. *Examen Critique*, tom. II., p. 122.) Still those who doubted or denied the truth of the story, were numerous, although the arguments used against it were not of such conclusiveness as to compel conviction.

In the year 1833, however, an assault was made upon the authenticity of the Zeno document, so ably conducted, and supported by such learning, that this long open question seemed at length to be decided, and that, too, without a prospect of appeal. In this year Captain Zahrtmann, of the Danish navy, published in the Transactions of the Royal Antiquarian Society of Copenhagen, a paper, subsequently communicated to the London Geographical Society, in which he submitted the narrative of these voyages to a searching cross-examination, and undertook to prove, both from internal and extraneous evidence, that it involved inconsistencies and misstatements wholly irreconcilable with the theory of its truth. The conclusion at which Zahrtmann arrived as the result of his investigation was that "both the history and the chart were most probably compiled by Nicolò Zeno, a descendant of the Zeni, who, for brevity's sake, may be called Nicolò Zeno, junior, from accounts which came into Italy in the middle of the sixteenth century, being the epoch when information respecting Greenland first reached that country, and when interest was awakened for the colony which had disappeared." The evidence by which this conclusion was supported cannot be given in this place, but some idea of its weight may be gathered from the words of a writer in the *North American Review* for July, 1838, who in a notice of Zahrtmann's paper, says: "We must say that our first impressions after perusing that masterly production, were so strong against even the possible truth of the account, that we well-nigh resolved to abandon the matter as beyond all hope of surgery, without bestowing another thought upon it. The writer brings such a mass of *primâ facie* proof to bear upon the subject, and discovers so many loose points and apparent inconsistencies in the story, that the argument comes upon one with the force of demonstration. At the same time, the perfect freedom of the paper from vituperative remark, and the admirable coolness as well as

skill with which the operator dissects his victim, are far from diminishing the effect produced upon the mind." This reviewer was, however, far from relishing the total annihilation of the Zeno story, and adds that a more careful examination of this elaborate essay had suggested some ideas "that detract, to some extent, from the conclusive character of the argument, and leave a ray of hope to the sanguine admirers of Venetian prowess." Still the prevailing opinion among scholars seems to have been that as a whole the argument was unanswerable, and, notwithstanding that Bredsdorf some years later attempted to revive the story, the adverse verdict of Zahrtmann has generally been accepted.

Recently, however, a new advocate of the authenticity of the Zeno story has appeared in Mr. R. H. Major, Secretary of the Royal Geographical Society of London, who has published in the last volume of that society's journal (1873) a paper in which he has reopened the whole question, taking in particular a new view of the chart of the Zenos, which presents the chief difficulties, and following and attacking point by point the argument of Zahrtmann, as the most formidable assailant of the pretensions of the Zenos that has yet appeared. In the opening portion of his paper Mr. Major says that the result of his investigation has been "to prove Admiral Zahrtmann, either in his facts or his deductions, wrong on every point, and to convict him of throwing upon an honorable man, occupying no less distinguished a position than that of one of the Council of Ten of the Republic of Venice, a series of aspersions of the most ungenerous character." This assertion seems unfortunate, since it prepares a disappointment for the reader. In fact none of the strong positions of Zahrtmann have been actually carried, although they have been greatly weakened by facts and suggestions offered by Mr. Major. Yet in dealing with the chart he has met with more success, having removed numerous stumbling blocks, and the impression left by a careful perusal of his whole argument is that the cause of the Zenos is by no means a lost one, but that they may yet be reinstated in their disputed honors.

In order to place in a clear light some of the more important points in the question which has thus been reopened for discussion, it will be necessary to give an abstract of the story of the voyages. In the year 1380, according to the narrative, although

the precise date is one of the points in dispute, Nicolò Zeno, a member of a distinguished Venetian family, being desirous of learning the customs of foreign lands that he might the better serve his own country, fitted out a ship at his own expense and sailed out of the Straits of Gibraltar, with the design of visiting England and Flanders. He encountered a violent storm, and, after having for several days been driven at the mercy of the wind, was wrecked on what he describes as the island of *Frisland.* Zeno and his companions escaped with their lives, but were attacked by the natives of the island and would have fared hardly but for the timely interference of a powerful chieftain, named *Zichmni,* the ruler of a neighboring principality, who happened to be in the vicinity, and into whose service the Venetian nobleman entered in the capacity of pilot of his fleet. After remaining with this chieftain a year or so, Nicolò Zeno wrote home to his brother Antonio to join him, which he did. Nicolò survived his brother's arrival four years and died in Frisland; after which Antonio remained ten years longer in the service of Zichmni and then returned to Venice, where he died probably about the year 1405 or 1406.

In the year preceeding Nicolò Zeno's shipwreck on the coast of *Frisland,* Zichmni, who is styled "Lord of Porlanda and Duke of Sorano," had defeated the King of Norway, to whose realm Frisland belonged, and was now engaged in completing his conquest of the island. In this operation, which terminated successfully, he received valuable support from his newly made pilot, to whose skill in nautical affairs he was on one occasion indebted for the extraction of his entire fleet from a position of imminent peril. After the arrival of Antonio, the two brothers accompanied Zichmni in a second expedition directed against *Estland,* which lay between *Frisland* and Norway. Here they succeeded in doing much damage, but hearing that the King of Norway was coming with his whole fleet to oppose them they departed, and being overtaken by a violent gale, lost some of their vessels. With the remainder they made harbor in the island of *Grisland,* which lay to the south. News came that the enemy's fleet had been entirely destroyed by the said gale, and Zichmni, "seeing that *Islanda* lay not far off to the northward," sailed thither to attack it, but finding the place resolutely defended, turned aside to other islands

near by, seven in number, viz: *Talas, Broas, Iscant, Trans, Mimant, Dambere* and *Bres.* He took them all and built a fort in Bres, where he left Nicolò Zeno, and he himself returned to Frisland.

The occurrences here mentioned occupy but a small portion of the narrative, which dwells more fully upon two voyages of discovery subsequently made, one by Nicolo, and a second by Zichmni himself, accompanied by Antonio; but since it is upon this part of the narrative that the discussion has mainly fallen, we shall present in this place, without designing to examine fully, some of the difficulties which have been raised by Zahrtmann and others, as well as indicate the manner in which they are met by Mr. Major. Upon the accuracy with which these statements can be made to fit the geography and the contemporary history of the North, will depend, in some measure, the amount of credence to be given to the remainder of the story.

The first question concerns the identity of the island of Frisland, which upon the map is represented as a large island lying some four degrees to the south of Iceland, and about equal to that island in extent. Since no such land now exists, it was the opinion of Cardinal Zurla among others, that the Frisland of Zeno had met the fate of Plato's Atlantis, and had been submerged beneath the sea. Zahrtmann, however, adopts the opinion of Buache, Eggers, and Malte Brun, that by Frisland was really meant the Færöe islands, and so far Mr. Major agrees with him entirely. This identity is proved satisfactorily, notwithstanding the incorrect delineation of the island on the Zeno chart, by the close resemblance of some of the names attached to places in Frisland to names occurring in the Færöe groups. Rock "Monaco," at the southern point corresponds in position with Rock Munk south of the Færöe islands, and the names "Sudero Colfo," "Streme," and "Andefard," must be considered to represent Sudero Sound, Strömöe, and Andefer. The name Frisland itself may, besides, be very plausibly explained as a corruption of Færöisland, although it is not quite clear that this name was ever in use in the North, the old name for these islands being, as Zahrtmann tells us, Fær-eyar. Estland, the place next mentioned, and said to lie between Frisland and Norway, was unquestionably the modern Shetland. Of this place Zahrtmann remarks:

"Though Shetland is called Estland, yet, in the first place, this is only a trifling transposition of the name in the spirit of the Italian language, and not exhibiting any greater deviation than is found in the other appellations given at different times to these islands, such as Hialtland, Yealtaland, Yetland, Zetland, and Hetland; and besides, we recognise so many names here, that we are almost tempted to believe that this was precisely the part of the chart best known to the author."

Nicolò Zeno, then, was wrecked upon one of the Færöe islands, and the military expedition led by Zichmni, was directed against the Shetland group. But who was this Zichmni, this prince with the lofty title of "Lord of Porland and Duke of Sorano"? Here is one of the most knotty points in the whole account, yet we must pass over it rapidly, merely giving in outline the facts upon which the decision of the question turns. The suggestion was first made by Forster that the Zichmni of Zeno was was one Henry Sinclair,[1] who, as is learned from the "Orcades" of Torfæus, was in the year 1379 invested by Hakon, king of Norway, with the Earldom of the Orkneys, Caithness, and the Shetland Islands. The succession to the earldom was contested, and Sinclair appears to have met with opposition in entering upon his possessions. To this extent the facts seem to support the Zeno story of the expedition to the Shetlands, but the difficulty arises that this is represented to have been an act of hostility against the king of Norway; whereas, a fact which Zahrtmann has insisted upon, and has supported by proofs, Sinclair at this time acknowledged fealty to the Norse crown, and ten years later, as a Norwegian Councilor of State, signed the act by which Eric of Pomerania was acknowledged true heir to the realm, which shows that up to this time his allegiance had remained unbroken. These facts cannot be set aside, and Mr. Major has but one way open for disposing of them, and that is to suppose that the Zenos, being at the time only imperfectly informed as to the true state of affairs, wrongly construed an attack upon a place which they understood to belong to the kingdom of Norway to be an act of hostility against the crown. Although this expla-

[1] Sinclair is the family name of the Earls of Caithness, the present Earl being the fourteenth. The third in descent from the Henry Sinclair here spoken of became the Earl of Caithness, the title previously having been the Earldom of Roselyn.

nation does not dispose in a quite satisfactory manner of the story about the loss of the King of Norway's fleet, it is perhaps admissible, if we make due allowance for exaggeration, provided the general accuracy of the narrative as a whole can be otherwise established. We pass therefore to consider briefly what seems to be the strongest evidence brought forward by Mr. Major in its favor.

Upon referring to the above given abstract of the account of this expedition it will be seen that Zichmni, on withdrawing from the Shetlands, took refuge in the island of Grisland, which lay to the *south*, and subsequently took a northerly course to reach *Islanda*, which he attacked without success. In this part of the narrative Mr. Major believes he has detected a confusion of names in which originated several of the blunders of the chart, and which, when clearly perceived, really affords the strongest possible proof of the authenticity of the original documents. It will be remembered that the original of the map was discovered in a dilapidated condition. How much of the copy was "restored" by the younger Nicolò there are no means of determining, but from an expression used by him, that he believed he had "succeeded with it tolerably well," it is clear that some portions of it must be credited to him. The *Islanda* of this passage has heretofore been taken to be Iceland, and this was undoubtedly the view taken of it by the restorer of the chart. Accordingly we find Grisland represented as a small island off the southern coast of Iceland, but to the *northwest* of Estland, notwithstanding that the narrative expressly states that it was *south* from this place. In pursuance of the same view regarding Islanda, the "restorer" of the chart, to adopt Mr. Major's theory, grouped the seven small islands, said to be near by, around the northeastern extremity of Iceland, where, as any good geographer even of the sixteenth century must have known there are no islands to be found. Now, although these islands do not belong to Iceland, they do belong to the Shetland group, "Talas" being Yelli; "Broas," Barras; "Iscant," Unst; "Trans," St. Roman's; "Mimant," Mainland; "Dambere," Hamna; and "Bres," Bressay. Mr. Major therefore concludes, and he supports his conclusion by other evidence, that the Islanda (or Islande, in the plural,) of the narrative is only a variation of the name Estlanda or Eslanda, and that what has heretofore been supposed to be an attempt of Zichmni upon Iceland, was simply a

renewal of his operations against the Shetland group. Grisland now falls into its proper position south of the Shetlands, being, in fact, Gross-ey, the largest of the Orkneys, the name having undergone a transformation similar to that which produced Frisland from Fær-eyar.

Space will not permit us to follow Mr. Major in the pursuit of other similar errors on the chart, which he attributes to the ignorance of the copyist; nor in his minute analysis of the narrative itself, which he shows *per contra* to accord wonderfully well with modern geography. It must suffice to say that his success in this investigation seems to warrant his concluding remark that, "In this fact we have proof that Nicolò Zeno, junior, the restorer of the map, is the cause of all the perplexity. But while this is a proof of his ignorance of the geography, it is the greatest proof that could be desired that he could not possibly have been the ingenious concocter of a narrative, the demonstrable truth of which, when checked by modern geography, he could thus ignorantly distort upon the face of a map."

Before resuming the narrative it may be well to notice in this place another strong point in the argument of Zahrtmann, and the answer made to it by Mr. Major. It was first pointed out by Cardinal Zurla that the date 1380 given to the voyage of Nicolò Zeno to Frisland cannot be correct, since mention of this cavalier occurs in the Venetian Annals as late as the 14th of December, 1388, when he was elected one of three syndics to take possession of the city of Treviso. This of course amounts to proving an *alibi* against the hero, who at this time should have been dead and buried in Frisland, and unless this discrepancy between the Annals and the narrative can be explained—and it must be borne in mind that the compiler of the narrative professes to have had before him letters which may be presumed to have borne dates—the gravest suspicion is cast upon the truthfulness of the latter. The answer filed against this objection shall be given in Mr. Major's own words: "The date of 1380, it is true, stands in Roman numerals on the Zeno map, and is written out in full in the narrative. But facts are stubborn things, and if we conscientiously and industriously resort to them instead of to preconceived conclusions, we shall generally arrive pretty near the truth at last. Admiral Zahrtmann elsewhere shows his perfect knowledge of a remarka-

ble fact, which, if he had been as anxious to find where Zeno was right, as where he might be made out to be wrong, would have rectified the above error of 1380, and neutralized all the arguments that he founds upon it. A relative of the family, named Marco Barbaro, wrote, in 1536, a copious work, entitled 'Discendenze Patrizie,' on Venetian noble families, and in the genealogical table of the Zeno family makes the following entry under the name of Antonio Zeno: 'He wrote, with his brother Nicolò the Cavalier, the voyages of the islands under the Arctic Pole, and of those discoveries of 1390, and that by order of Zicno, King of Frisland, he went to the continent of Estotiland in North America. He dwelt fourteen years in Frisland, four with his brother Nicolò and ten alone.' Cardinal Zurla first mentioned this fact and I have verified it, by procuring an extract of the entry from Venice through the kindness of my distinguished friend Mr. Rawdon Brown. . . . There is little doubt that Barbaro derived this statement from Nicolò Zeno, who had so nearly, but not quite, destroyed, when a boy, the old papers on which it was based. But in drawing up the said statement Nicolò Zeno showed that he was cognisant in 1536, two and twenty years before the Zeno narrative and maps were printed, of that true date of 1390, which coincides exactly with the evidence of the annals of his country. If both the dates 1380 and 1390 emanated from him, one was clearly a mistake, and as we can have no doubt which was the erroneous one, we have in the error itself, whether made through carelessness in either or both cases by Nicolò, or by the printer, or by the engraver, a proof that Nicolò was not at least the subtle and ingenious concocter of falsehoods that Admiral Zahrtmann would represent him to be." It may be added that a passage cited elsewhere by Mr. Major from the "Orcades" of Torfæus, seems to harmonize very well with this corrected date of 1390, and may possibly have reference to the same military operation against Shetland which in the Zeno narrative is exaggerated into a contest with the whole power of Norway. The passage is this: "In the year 1391 the Earl of Orkney slew Malise Sperre in Shetland, with seven others. A certain youth, however, with six others, procured a vessel at Scalloway and escaped to Norway." Torfæus does not give the occasion of this broil, but as Malise Sperre, a cousin of Sinclair, is known to have been a rival claimant of the

earldom, it is fair to assume that the trouble was over the disputed possession of Shetland. The contest may have been one of some magnitude, and as the friends of Malise Sperre, apparently, were Norsemen, there were some grounds for a misapprehension of the situation by the allies of Sinclair.

Having seen this portion of the Zeno document placed upon a respectable footing, the reader may be presumed to feel some interest in the succeeding portion of the narrative. We left Nicolò Zeno in a fort on the island of Bres, or Bressay, one of the Shetland group. In the following summer he resolved to try his fortune in a voyage of discovery, and, having fitted out three small vessels, he sailed northward in the month of July, and arrived in Engroneland, or Greenland. Here he found a monastery of Dominicans and a church of St. Thomas, close by a hill, "which vomited fire like Vesuvius and Etna." A curious account is given of this singular community of Friars, and of the way in which they managed to sustain life in this cold and desolate region. The monastery and church were heated by the water of a hot spring, and by means of this same spring the monks cooked their meat and baked their bread. By a judicious use of this hot water they also raised in their small covered gardens the flowers and fruits of temperate climates, and thereby gained much respect from their neighbors, who brought them presents of meat, chickens, etc. The hot water falling into the sea kept it free of ice to a long distance, and to this open space fowl and fish were attracted in great abundance. Their houses were built around the base of the hill, and were circular in form, with an opening at the top to admit light and air, while the warmth of the ground below supplied all necessary heat. In the summer they were visited by ships from the neighboring islands and from Trondheim, which brought them corn, cloths, and other necessaries in exchange for fish and skins. Some of the monks were from Norway, Sweden, and elsewhere, but most of them from Shetland. The fishermen's boats were like a weaver's shuttle; they were made of the skins of fish, and sewn together with fish bones in such a manner that, in bad weather, the fisherman could fasten himself up in his boat and expose himself to the wind and sea without fear, for they could stand a good many bumps without injury. The friars were liberal to workmen and to those who

brought them fruit and seeds, so that many resorted to them. Most of them, especially the principals and superiors, spoke the Latin language. This is in substance the account brought from Engroneland by Nicolò Zeno, who, shortly after his return to Frisland, died from the effects of exposure in this rigorous climate.

After the death of Nicolo, Zichmni would not allow Antonio to return to Venice, but being determined to make himself lord of the sea, wished to send him out to the westward, to verify the report of some fishermen who had discovered some rich and populous countries in that direction. The story of these fishermen, which was embodied in a letter from Antonio to his brother Carlo, is in brief as follows:[1]

"Six and twenty years ago, four fishing boats put out to sea, and encountering a heavy storm were driven over the sea in utter helplessness for many days, and at length came to an island called Estotilanda, lying 1,000 miles west of Frislanda. One of the boats was wrecked, and its crew of six men were brought by the natives into a large and populous city, and taken before the chief, who sent for many interpreters to speak with them. Only one of these, who spoke Latin and had also been cast by chance upon the island, could understand them. On learning who they were and where they came from, the chief desired that they should stay in the country, which they did perforce for five years, and learned the language. One of them in particular, having seen much of the island, reported that it was rather smaller than Iceland, but much more fertile, having in the middle a high mountain, whence flow four rivers which water the whole country. The inhabitants are very intelligent, and possess many arts. In the king's library were found several Latin books, which were not at that time understood. The people had their own language and letters, and in the south there was a great and populous country very rich in gold. Their foreign intercourse was with Engroneland, whence they imported furs, brimstone and pitch. They sowed corn and made beer, which is 'a kind of drink that north people take as we do wine.' They had woods of immense extent, and many towns and villages. They built small boats and sailed them, but knew

[1] The fishermen's story is here given in the words of Mr. Major.

nothing of the compass. Hence these fishermen were held in high estimation, and were sent southward with twelve boats to a country called Drogio. They arrived there after a perilous voyage, but the inhabitants being cannibals, most of the crew were eaten. The fisherman and his companions were spared because they could catch fish with nets; and they were so much prized on this account that a neighboring chief made war on their master to get possession of them, and, being the stronger, succeeded. In this way they spent thirteen years, being fought for and won by more than twenty-five chiefs in that time; and in the course of his wanderings the fisherman gained much information. He describes the country as very large, and, as it were, a new world, the people very rude and uncultivated. They go naked and suffer from the cold, but have not the sense to clothe themselves with skins. They live by hunting, but as they have no metal they use lances of wood, sharpened at the point and bound with strings of hide. They fight fiercely, and afterwards eat the conquered. They have chiefs and laws, which differ in the several tribes. They grow more civilized towards the southwest, where the climate is milder, and they have cities and temples to their idols, in which they sacrifice men and afterwards eat them. In those parts they have knowledge of gold and silver.

"At last the fisherman determined, if possible, to return to his country, and finally succeeded. He worked his way to Drogio, where he stayed three years, when some boats from Estotiland came to the coast and received him on board as interpreter. Finally he returned to Frisland, and gave an account of this important country to Sinclair.

At length the expedition is organized for the verification of the fisherman's statements, and as the story of its adventures is that part of the narrative which has caused the greatest perplexity, it is here given in full:

"Our great preparations for the voyage to Estotiland were begun in an unlucky hour, for three days before our departure the fisherman died who was to have been our guide; nevertheless Zichmni would not give up the enterprise, but, in lieu of the fisherman, took some sailors that had come out with him from the island. Steering westwards, we discovered some islands subject to Frislanda, and passing certain shoals came to Ledovo, where

we stayed seven days to refresh ourselves and to furnish the fleet with necessaries. Departing thence, we arrived on the 1st of July at the Island of Ilofe; and as the wind was full in our favor we pushed on; but not long after, when we were on the open sea, there arose so great a storm that for eight days we were continuously kept in toil, and driven we know not where, and a considerable number of the boats were lost. At length, when the storm abated, we gathered together the scattered boats, and sailing with a prosperous wind we discovered land on the west. Steering straight for it, we reached a quiet and safe harbor, in which we saw an infinite number of armed people, who came running furiously down to the water side prepared to defend the island. Zichmni now caused his men to make signs of peace to them, and they sent ten men to us who could speak ten languages, but we could understand none of them, except one that was from Shetland. He being brought before our prince, and asked what was the name of the island, and what people inhabited it, and who was the governor, answered that the island was called Icaria, and that all the kings that reigned there were called Icari, after the first king, who, as they said, was the son of Dædalus, king of Scotland, who conquered that island, left his son there for king, and gave them those laws that they retain to the present time; that after this, when he was going to sail further he was drowned in a great tempest; and in memory of his death that sea was called to this day the Icarian Sea, and the kings of the island were called Icari; that they were contented with the state which God had given them, and would neither alter their laws nor admit any stranger. They therefore requested our prince not to attempt to interfere with their laws, which they had received from that king of worthy memory, and observed up to the present time; that the attempt would lead to his own destruction, for they were all prepared to die rather than relax in any way the use of those laws. . . . . To all this our prince made no reply, beyond inquiring where there was a good harbor, and making signs that he intended to depart. Accordingly, sailing round about the island, he put in with all his fleet in full sail, into a harbor which he found on the eastern side. The sailors went on shore to take in wood and water, which they did as quickly as they could, for fear they might be attacked by the

islanders; and not without reason, for the inhabitants made signals to their neighbors with fire and smoke, and taking to their arms, the others coming to their aid, they all came running down to the seaside upon our men, with bows and arrows, so that many were slain and several wounded. Although we made signs of peace to them, it was of no use, for their rage increased more and more, as though they were fighting for their own very existence. Being thus compelled to depart, we sailed along in a great circuit about the island, being always followed on the hill-tops and along the seacoast by an infinite number of armed men . . . We therefore resolved to put into some safe harbor and see if we might once again speak with the Shetlander, but we failed in our object; for the people, more like beasts than men, stood constantly prepared to beat us back if we should attempt to come on land. Wherefore Zichmni, seeing that he could do nothing, and that if he were to persevere in his attempt, the fleet would fall short of provisions, took his departure with a fair wind and sailed six days to the westward; but the wind afterward shifting to the southwest, and the sea becoming rough, we sailed four days with the wind aft, and at length discovered land."

This land proved to be Greenland, and to the harbor and the headland near it they gave the name Trin. In the distance they beheld a "great mountain which poured forth smoke," and a party of a hundred men were sent out to examine into this strange phenomenon. They returned after eight days and reported that "they had been up to the mountain, and that the smoke was a natural thing, proceeding from a great fire in the bottom of the hill, and that there was a spring from which issued a certain matter like pitch, which ran into the sea." Zichmni, being taken with the pureness of the atmosphere and the aspect of the country, conceived the idea of making a settlement, or, as Zeno calls it, "founding a city." As, however, his people were anxious to get home, he merely retained the row-boats and such of the men as were inclined to stay with him, and sent all the rest away under the command of Antonio. After twenty days sail to the eastward, and five to the south-east, Zeno found himself past Iceland, and in three days sail reached Frisland; and so ends the story.

We shall not enter here upon the inquiry how much of the pre-

ceding narrative is fact and how much is fable, nor have we space to notice the numerous conjectures which have been hazarded with respect to the identity of Icaria, Estotiland and Drogio. Mr. Major will admit the existence of but one fable in the whole narrative, viz: the story about Dædalus and the Icarian Sea. Yet even this he believes to have been based upon a fact. Accepting the view of Forster, he regards the name Icaria as an Italian's pronunciation and spelling of Kerry, the name of one of the southwestern counties of Ireland; but since it is quite unlikely that the story of Icarus was likewise picked up by Antonio Zeno on the Irish coast, he is forced to admit that this excrescence on the narrative is most probably the handiwork of the compiler. He suggests, as a probable explanation, that Nicolò Zeno, junior, found in his ancestor's letter the name Icaria only, without the story, and that its form suggested to him to engraft upon it the well-known Grecian fable. It is needless to observe that a man who could thus tamper with his family archives, was not incapable of eking out a slender story in other parts as well. The account said to have been given by the fisherman, Mr. Major thinks "to have been, for the close of the fourteenth century, a pretty good description of the state of things in America, down as far as Mexico." But, after his admission with respect to the above noticed fable, most readers will be hard to convince that these accounts of America did not come into Italy through Spain, in the early part of the sixteenth century, instead of through the north of Europe by way of Frisland. Again, Mr. Major remarks that the description of Estotiland "very fairly agrees with Newfoundland." But, to our apprehension, it applies much better to the Garden of Eden, and better still to the ideal world of the Hindoos in the centre of which stood Mount Meru, from whose summit flowed down the four divisions of the celestial Ganges.

To sum up the results of Mr. Major's investigation, his argument has gone far to prove, that the Zeno brothers actually did visit the Northern seas; that they assisted Earl Henry Sinclair in gaining possession of his earldom; and that they visited Greenland. (His discussion of this point has here been entirely omitted). The embellishments of the narrative, however, still lie under a grave suspicion, with a strong presumption that they are in a great

measure the deliberate invention of the younger Nicolò Zeno, the compiler of the whole account, who unscrupulously eked out his scanty documents with such material as he had at hand.

G. S. JONES.

THE VALUE OF PALEONTOLOGY.[1]

I.

PALEONTOLOGY is an exact science. It embraces generalizations or laws obtained by induction, which may be deductively applied to the unknown. The first law is an illustration of the uniformity of nature's methods; namely, the law of the persistency of type. An organized structure once created, and existing under circumstances not hostile to its working, is adhered to with the greatest fidelity, and extended in time and space. This constant law is the key to this as to the other biological sciences, and occasionally surprises the student of evolutionistic proclivities. On this basis the possibility of reconstruction of the extinct forms of the past will always rest, and the certainty of the law is unconsciously admitted by every paleontologist who determines, names or classifies a fossil from anything less than a perfect specimen. It is assumed every day, and universally allowed, although occasionally even an expert is found who sometimes questions it, and still more frequently an inexpert who does not read nature aright.

The application of the law is, however, various as the given terms, *i. e.*, the remains preserved, differ in significance. Thus, certain parts are common to all stoves, and distinguish them from all other articles of furniture; but certain other parts not only belong to a stove, but mark a given pattern of stove, since they belong only to it. A still more minute range of appearances is found only in one man's make of stoves, and others in that of another man. Hence, a person acquainted with stoves, sewing machines, etc., can readily determine the origin of a very small part by referring it to its proper kind and make.

[1] From the Introduction to Hayden's reports of the results of the Geological Survey of the Territories, Vol. II.

This law of persistency presupposes a knowledge of the pattern as essential to its deductive application. Hence a difficulty at once suggests itself as arising when a portion of an animal belonging to a new pattern is discovered. That patterns quite distinct from those known to zoölogists have existed in past ages, has been well proven by paleontologists. How can the structures of a species of such a kind be inferred from a fragment? Another law equally true with that of persistence, has been developed from the facts, but it is much more difficult of application. This is the one already defined in the pages of this journal,[2] under the name of the law of "successional relation." It is absolutely certain that the types of nature, whether primary or subordinate, form series of steps passing from one condition of relations to another. The application evidently is, that if a portion of an animal exhibits a form intermediate between two known forms or types, the remainder of the animal's structure possesses the same kind of intermediacy. This law is tacitly admitted and employed by paleontologists, but there is a difficulty of application in consequence of the existence of other laws now to be considered.

The first difficulty arises from our possible ignorance of one terminus of the series or line in which our fossil represents a stage. This objection is more theoretical than real, because the living classes and orders are the structural extremes of the lines of succession; nevertheless, among divisions of lesser range many have reached their culmination and disappeared in times past. These points of culmination must be known in order to ascertain the direction of the succession. Every discovery, however, is not that of an advanced position on such lines; hence this difficulty is of only occasional recurrence.

The preceding considerations all express different phases of the law of uniformity. I now refer to the law of variation, which is in apparent conflict with it. It is the law which expresses evolution as opposed to persistence of types. It especially limits the application of the last law, that of uniformity in succession, *i. e.*, that when one portion of structure occupies a position intermediate between two already known types, the remaining parts of the same animal or system of organs will occupy the same relation

[2] Penn Monthly, 1872, p. 229.

of structure to the corresponding parts of the known. This is not uniformly true. The law of variation intervenes, which states that it may occur, that while one part of an organization occupies a relation of intermediacy, the other parts do not exhibit exactly the same relation. It is by the unequal mingling of structural points that new lines of succession are marked out. Thus it is that the power of reconstruction from fragments is limited, but not sufficiently so as to justify the epithet "pretension," which has been applied to the claim made. Besides, two other laws remain, which are of great importance to the paleontologist.

Illustrations of the preceding laws may first be given. If a fragment of an animal be found, which contains a certain type of teeth known as the true selenodont, it is certain, in accordance with the law of uniformity of type, that the first bone of the hind foot of that animal (the astragalus) possessed two pulley-grooved faces, one above and one below, and not one only, as in most animals; also, that the lower pulley face was succeeded by two subequal toes, and that the lateral toes were either reduced in form or wanting. There is no mechanical relation between the structures of the teeth and foot; their accordance is simply a fact of type of a selenodont artiodactyle.[3] Again; if we find a portion of a foot which presents a joint between the first and second rows of bones which form the sole, we are absolutely certain that the animal had the two outer ear bones external to the skull, forming a part of the lower jaw and the connecting rod by which the latter is attached to the skull. This is a type law of the bird and reptile. Again, if I find a part of a foot of the structure just named, where the first row of bones of the sole is united into one mass, and closely embraces the leg bone without being continuously united, I know that I have an animal with teeth, with a very long hip bone and a very long series of united vertebræ (or sacrum) resting upon it—in other words, a dinosaurian.

The law of uniformity in successional relation is well illustrated by the genus *Loxolophodon*. The first bone of the foot (astragalus) of this animal, exhibits characters intermediate between that of the elephants (Proboscidia) and odd-toed hoofed mammals (example, tapir); the remainder of the skeleton does the same;

[3] Represented by a Ruminant.

the neck vertebræ are similar to those of the former, while portions of the skull resemble corresponding ones of the latter. The foot of a dinosaur is intermediate between that of a reptile and that of a bird; so are the sacrum and pelvis. The sternum of a frog of the family *Discoglossidæ* is intermediate between those of ordinary frogs and salamanders; so are the vertebræ and ribs.

Examples of the limitation of the latter rule are still more numerous. They may be produced from the three cases cited. Thus in the Dinosaur it might once have been said that the jaws did not partake of the intermediacy, because they all present teeth, and are never smooth, like those of birds. Yet birds with teeth have recently been discovered, which deprives us of the use of this character as a definition. In the Discoglossid frog the cranium is not intermediate in structure between the frog and salamander, but is that of a frog. In the *Loxolophodon* the toothless front of the upper jaw is not a general character of either of the orders which it stands between.

These difficulties arise from the existence of the subordinate variations or sub-types of a general or major pattern, and for their resolution require only a new application of the first law of uniformity on the lower plane. If the sub-characters defining the sub-pattern be known, the existence of one presupposes that of the others. The structure of an artiodactyle astragalus will not enable me to infer the character of the incisor teeth of the animal; for this I require some other, more minutely correlated portion. So I can infer the ribs and vertebræ from the sternum of the Discoglossid frog, but not the cranium; for this I require some part correlated with Discoglossid characters only, and not only significant of the relations to the orders of Batrachians, as are the characters mentioned, although it happens by the accident of discovery that none but such frogs possess them to-day.

The two laws which further aid the deductions of the paleontologist are those of mechanical relations and of embryonic paral lelism. One structure requires another in order that an animal be viable. Thus long legs in a grazer presuppose a long neck to enable it to reach the ground with its lips. Hooked claws presuppose carnassial teeth or a hooked beak. To be properly poised on two legs instead of four, the weight of the viscera must be transferred backwards and the anterior regions of the body

lightened. This we find to be the case with birds and *Dinosauria*. The lower bones of the pelvis with the contained organs are thrown backwards, while the fore-limbs are lightened and the head reduced in proportionate size.

The parallelism of types with transient embryonic conditions of other types aids the paleontologist essentially in the classification or proper location of a specimen. Its relation to known series must be first determined, as this obviously precedes in reconstruction all application of the law of uniformity. Such reference having been made either to a new series or to a place in a known series, the considerations heretofore adduced come into view, but not sooner. Hence the law of parallelism is as essential to the paleontologist, as it is all-pervading and all-expressive of nature herself.

II.

Paleontology in its relation to Geology is a partially empirical science. Thus while its indications are definite for one locality, they have not identical significance for all localities on the earth's surface. The lower we descend in the scale of being, the more uniform over great areas are its phenomena; but among higher animals, especially vertebrates, the greater the geographical peculiarities as compared with the stratigraphical. Prof. Agassiz once said that the existing geographical faunæ are more distinct than the extinct faunæ of two consecutive epochs of geologic time, a statement justified by many facts. Hence it has been believed by some that fossil vertebrates cannot furnish conclusive evidence of the age of the rock strata in which they occur. For, say they, we have to-day existing on the Australian continent, animals that approach more nearly to those found fossil in the Jurassic formations of Europe than to any now living on the latter continent; so that were Australia to be presently submerged, and her strata and fossils again brought to light, the paleontologist would assert that the sun had not shone on that land since the days of the Jura. And so he would were he not at the same time a zoölogist; just as the bare zoölogist would err in the opposite direction of assuming the modern age of the European Jurassic beds, because they contain the living types of Australia. Thus a foundation fact of zoölogy properly applied is essential to the paleontologist; namely, that

the earth presents to-day four or more distinct faunal areas, the more prominent among which are the Australian, the South American, and the temperate lands of the Northern Hemisphere. Each of these possesses many peculiar forms of life not now found elsewhere. Has this distinction always prevailed? Paleontology answers decidedly in the affirmative, so far as extinct mammalia are concerned. There seems to be no doubt that the faunal distinctions have a very ancient origin, and are therefore to be first considered when estimating the age of strata from the contained mammalian remains. The explanation of this diversity is not yet attainable, but an important advance has been made by the discovery of the great similarity between the extinct forms of the Northern Hemisphere and the living or more modern ones of the Southern Hemisphere faunæ. The Jurassic character of much of the Australian fauna is known, while prevalent types of South America and Africa can be shown to have much relation to Eocene types of the north. In North America and Europe, tapirs, opossums, coatis, civets, kinkajous, lemurs and toxodonts belong to the Eocene; now these animals characterize the southern continental life, or as is the case with toxodonts, have but recently become extinct there. This mode of defining those faunæ is not, however, exact, since many modern types have found their way into them, especially in the case of Africa.

How then is life significant of chronological station in the earth's strata? Since very many forms of animals are so widely spread and at the same time so distinctly limited in range on the earth's surface to-day, the same order must have prevailed in past time and have been of equal significance. That this law of uniformity has prevailed in the past as in the present is amply proven by the paleontology of a single zoölogical area taken by itself. The apparition of types over the northern land area has been nearly universal. This fact has only been placed within our reach by modern investigations in North America; for until the sister continent of Europe-Asia was explored, no one could be sure what degree of individual peculiarity her extinct life might present. Now it is certain that the succession of Tertiary beds was mutually similar, and that the cotemporaneous deposits contained in a large degree similar life, and that intermediate stages of the one can be properly intercalated in the

vacant interspaces of the other. The resemblances between the Lower Eocenes of New Mexico and Wyoming and that of France are marked; similarity between the Pliocenes of the respective continents is evident. Descending in the scale, the parallels between the North American and New Zealand cretaceous are very apparent, and the faunæ of the Carolinian and Würtemburgian Trias were the same. The great interruptions in life marked by the appearance of great land areas near the close of the carboniferous and cretaceous periods are universally observed in the zoölogical areas of the Northern Hemisphere or Arctogæa. The close of the cretaceous everywhere saw the end of Ammonites, Rudisites, and Sauropterygian and Dinosaurian reptiles, in spite, in North America at least, of physical continuity of deposits.

Was this succession of interruptions of life universal over the globe, and do these trenchant lines justify the old assumption of repeated destructions and recreations of animal life? The former question has already been answered in the negative by the explanation of the characters of the existing faunæ of the southern hemisphere, where ancient types still remain in considerable numbers. Moreover, some of the later periods of both North America and Europe are characterized by a large predominance of forms of the corresponding southern continent. It is indeed evident that migration from the one continent to the other has taken place, and is amply sufficient to account for the abrupt changes in the life of each, without necessitating the intervention of creative acts. If glacial periods be dependent on cosmic movements, the obliquity of the earth's axis to the sun would cause an alternation of cold periods in the opposite hemispheres. This is well known as a most potent cause of migration and extinction, and the known relations of the faunæ would thus result from a greater or less alternate invasion of the one hemisphere by the life of the other.

But within the great time boundaries are distinct land faunæ, whose relation of distinction may not thus be accounted for. Thus the Miocene and Pliocene faunæ of Western America are entirely distinct, but with corresponding members. The alternate presence and absence of water areas adapted for the preservation of the remains of the animals will abundantly account for such minor interruptions. Such changing topography is well known as due to the slow vertical oscillations of the earth's crust.

The original question, the exactitude of the chronological significance of structural types, has been momentarily held in abeyance. Is paleontology a science so far exact as to furnish a chronological scale of terrestrial strata? The admission that the known tertiary faunæ, for instance, are but fragments of a continuous succession, would appear to invalidate any such claim. It would indicate that the restriction of a given type to a given horizon is only a matter of discovery, and that another accident may at any time give it a new range. This objection has but little weight. Fragments though they be, nearly related formations as the Tertiaries, are obviously the visible portions of a serial succession of life. Like the bright lines in a spectrum, the order is not disturbed by the temporary obliteration of a part of the colors, but the visible portions indicate the relations of the component parts with infallible certainty. The more universal the physical interruption the more far-reaching the break in the succession of life in any one locality, and hence the greater the value of remains of animals as indication of relation in time. The change of faunæ in Arctogæa at the close of the cretaceous is a case in point. A dinosaur, sauropterygian, ammonite or rudist are as definite indicators of the life that preceded the change as a tapir or civet-like carnivore is of the age that followed.

It has been stated that the life of the present period in the Southern Hemisphere is not homogeneous. The same is true in a still smaller degree of the Northern. Thus, if we include India in the latter, the elephant is a miocene form, and the true rhinoceros pliocene. Further north, the dogs are miocene. In North America the opossum, and probably the raccoon, are eocene; the wolves and foxes are miocene, and the weasels pliocene. Perhaps the cats first appeared in our pliocene. Comparatively few mammalian types mark the latest geologic epochs. Such are the ruminants, as deer, antelope and oxen, with the true horses, which all commence in the upper pliocene of Europe. Finally, man alone signalizes the last or glacial period, and is to reach his culmination in the ages that intervene between that great time boundary and one to come.

Thus a certain proportion only of the life of a given epoch is characteristic of it, that is, originates in it, the remaining members being legacies from preceding ages. E. D. Cope.

PRESIDENT GRANT ON FINANCES.

THE parts of the President's message that have excited the most of comment and discussion are naturally those that relate to the currency and the south. On the former subject Gen. Grant still holds his position as an advocate of the resumption of specie payments, and as maintaining the possibility of that resumption at an early day. It is upon this last question that we fairly join issue with him. We have no belief in inflation, because we are no admirers of our inelastic "national currency;" but neither do we believe that that currency is depreciated. If we could replace one-half or even one-third of its volume by gold coin the night before to-morrow, so that gold would be worth greenbacks and greenbacks worth gold, and neither at a premium, the purchasing power of the currency would be exactly the same as it is to-day, and the new currency would have all the objectionable features of that which we now have;—at some times of the year it would be in excess, at others needlessly and injuriously scarce, because inelastic in volume.

"Why, then, does gold sell at a premium? Does not that mean that the greenbacks are depreciated in the same degree? Do not all the great lights of *the science* of Political Economy teach us that?" All those great lights insist, after Turgot, that "gold is a commodity like any other." And they teach, that if any commodity be scarce in any country, in proportion to the demand for it, then its market price must rise accordingly. That gold is inordinately scarce in this country is admitted on all hands. How could it be otherwise? We send vast quantities of it out of the country every year to pay the interest on bonds that are held abroad;—not government bonds only, but bonds and stocks of corporations of all sorts. We also purchase for gold a vast quantity of luxuries—far more than our exports of all sorts will pay for. Consequently both the importers, the corporations and the Government are really bidding against each other for gold. The Government avoids appearing as a bidder, and even puts on the appearance of a seller, by insisting on having its customs paid in gold. It makes its purchases through the importers, that is, and having bought too much, it comes into the market again to sell its

surplus and prevent the price rising too high. Now resumption of specie payments can only be effected through making gold so plenty or diminishing the demand for it so much—or rather by both—that it will cease to command a premium.

"But is not gold a fixed standard of value, the same always and everywhere?" Not by any means; there is no commodity but varies with the relation of the supply to the demand. From the beginning of our era to the discovery of America, its purchasing power—its price, that it—rose steadily. From that till the revolt of the Spanish American colonies, it fell. From that till the gold discoveries of the Ural, Australia and California, it rose again. From that till our own day it is falling. It has never fallen in anything like the same ratio as the increase of its price, because its influx into a wide-awake country stimulates industry and production, and creates an increased demand for it, that all but equals the increased supply. Nor is it, like other commodities, sure to go wherever it is most needed, but only wherever it is of most use, which is quite another matter. It drifts to where there is most of it, because there its application to industry is most developed, and its power to purchase is the greatest. It drifts from the poor to the rich countries. We have less of it, not because paper has driven it out of use, but because it has gone to the markets where it purchases most.

"But does not the inflation of the price of all sorts of commodities show an excess of currency and its depreciation?" Prices may have risen without being inflated. The prices of labor, of raw material and of food rise always with the advance of a country in varied industry, but in different ratios. They have done so in America under the tariffs of 1861–74, because they were all unnaturally low when we depended upon foreign countries for a market, and the laborer had small choice of occupation. They have risen also in France and Germany, and the advance in food and other general expenses of living is greater in the latter than with us. We do not say that it is as high yet; yet Germany pays in gold, and if our prices are inflated hers are more so. If everybody east of the Alleghanies were to go back to farming, provisions would be cheap again, and labor cheap also. But the comfort of every class, except perhaps of those who live on incomes that are absolutely fixed, would be very greatly diminished.

The only mischief that is really alleged as wrought by our paper currency is, that its variation in value leads producers to insure themselves against its fluctuations by asking high prices. If in any case this is true, the producer is acting under a false impression, which should in every way be corrected, instead of being publicly endorsed by the head of the nation. Gold rises and falls in value with the relation of its demand to its supply, without paper money varying in the least. And even that variation has become so slight during the last year, that the use and the power of the Gold Room have alike vanished.

"But would not its contraction bring our paper money to par with gold? and is it not the duty of the country to appreciate its currency when that currency is not at par with gold, so that its currency and that of the world may be of equal value?" This last result would certainly be a convenience, just as an international system of weights and measures must be. But if our currency be not depreciated (and we believe it is not), it cannot be its duty to make it as dear and as scarce as gold is. Depreciation can only arise from two causes—the bad credit of the issuer and the excess of the amount of issue. The price that Government bonds bring disposes of the former supposition; the suffering that Secretary McCulloch inflicted upon the country by his ill-judged contraction refutes the latter. It was further refuted by the panic of 1873. Enough greenbacks could not be obtained to carry on the business of the country. The very men who now applaud the President for advocating resumption, howled round him that black Sunday as if they had been the Central Park Menagerie broke loose, begging him to "issue the reserve." But when greenbacks were scarcest, they were not as scarce as gold, and gold still brought a premium. Now, who ever heard of a currency depreciated because of over-issues, and at the same time in high demand?

Gen. Grant can only propose that the treasury shall collect more duties, and hoard the gold till it is strong enough to resume. But that will only raise the price of gold by making it scarcer than ever. And where are the increased customs to come from? Not from raising the existing duties—no one proposes that. No, but by lowering them, and thus cheapening articles of foreign production, to the increase of their consumption. And every article

thus consumed has to be paid for with gold sent out of the country, so that this change will simply remand the day when resumption is possible to the indefinite future.

Suppose that the Treasury had in its vaults all the gold in the country, and offered to resume specie payments, what would be the outcome of the attempt? Suppose that I have in my possession all of an article that there is in a country, and offer to sell it at less than market price, and that its quantity is so small that capitalists have already been able to create profitable corners, by making it scarce; how long will it take me to get rid of my stock of that article? Just as long as would be needed to empty the National Treasury of its gold. The proceeding would be a "big thing" for the Wall street men, and for no one else. The Government would come out of the tussle poorer by several millions, that had gone into the pockets of speculators, and the Gold Room would be prosperous as ever it was.

What then can be done towards resumption? Are we powerless? (1.) Persist in the strictly protective policy that will reduce our purchases abroad to a minimum, and turn the balance of trade in our favor. But, mark you, as soon as it turns we shall have the battle of Armageddon with the Bank of England. The Bank screw will be put on and kept on as it was last winter, to turn the current of gold back to its vaults. Under the Act of 1844, the directors have no choice. They must raise the rate of discount when gold leaves them, and diminish the amount of their loans, forcing those who must pay by a given date to raise money by wholesale sacrifices of their goods in the Continental and American markets. We will again have steel rails selling in America at twenty and thirty dollars a ton less than the cost at the Sheffield factory. Only steady persistence will carry us through a struggle that must come some day.

(2.) Our bonds must come home and be held at home. Now that North Pacific and other fancy stocks are out of the way, they furnish the best possible investment for the small savings of our agricultural classes and our workmen. France has rallied from the financial exhaustion into which imperial folly plunged her, because just those classes were strong enough and patriotic enough to loan the Government all that it needed. With the demand for these and all other safe bonds already created by the National

Banking system, and the growing power and willingness of the people to keep the national debt in their own hands, we look to see the day when not a dollar of gold will go out of the country to pay interest in the money markets of Europe.

But were we back to specie payments to-morrow, the millenium would not be here: we are ill off, not in having bad money, but in using so much of it, good or bad. Our financial system is as yet only half developed. While our ways and means of payment in our great cities are such, that most of the large transactions are effected by means of money of account, without the intervention of either gold or paper, business between different parts of the nation, especially between the East and the West, and often between adjoining counties, and between near neighbors, is effected in the old and expensive manner of making payments by the use of money, legal tender. Could we extend our credit system of payments, the volume of money necessary for business purposes would be vastly diminished. As it is, the best change that we can make, and the only one that can lead to a permanent return to specie payments, is to establish banking on the principle of freedom and competition. Therefore, let it be enacted that the comptroller of the currency issue to individuals or to associations of individuals, for the transaction of banking business, national currency to any amount, upon due proof of organization, in accordance with the following conditions: Let it be enacted that each stockholder shall be liable for losses, for a sum equal to the amount of his stock. That national currency be issued to such institutions upon due proof that a deposit of United States bonds has been made with the Treasurer of the United States or with any one of the Assistant Treasurers of the United States. That such issue shall not exceed ninety per cent. of the par value of the bonds deposited as aforesaid. That banks shall hold a reserve in legal tender of the United States or in United States bonds, of twenty-five per cent. of the amount of their deposits. That the said reserve shall never be kept with other banks. That banks shall not be required to hold a reserve for the redemption of their circulation—that being secured by the United States bonds deposited with the Treasurer of the United States, or with the Assistant Treasurers, by the liability of the stock holders for losses, and by the capital of the banks not invested in

United States bonds. That banks shall be subject to no national tax. That banks shall pay no interests on deposits. That banks shall redeem their circulation, on presentation, in sums not less than fifty dollars, in legal tender of the United States or in United States bonds, at the option of the bank. That the comptroller of the currency, or any assistant treasurer of the United States, shall issue, in times of financial panic, national currency to the banks in amounts not less than fifty thousand dollars, upon due proof of the deposit of United States bonds. That banks shall receive no interest on United States bonds deposited to secure the extraordinary issue of currency. That nothing in this act shall be construed to authorize any increase of the principal or interest of the public debt of the United States.

The bonds of the United States being payable at maturity in gold, the notes issued by the national banks are therefore also payable ultimately in gold.

The four and four and a half per cent bonds of the United States would at once find a large market at par among those who desire to transact a banking business, and the credit of the United States would at once be enhanced, and the credit system would be extended to all parts of the country alike.

Thus nearly all that concerns the relations of debtor and creditor would be settled by the aid of the banks, the clearing houses, and the easy and inexpensive forms of exchange between different parts of the nation that would follow a general introduction of this system of banking.

The law proposed creates a reserve to meet the excessive demands made in times of panic and financial crisis, and also prevents the curreney from becoming too abundant by the banks being obliged to redeem their notes on presentation in sums not less than fifty dollars, in legal tender of the United States or in United States bonds, at the option of the bank. It also makes possible the general use of the credit system, a system more valuable and less expensive than that now in use, or than any yet proposed. It further insures the validity of the note and the steadiness of the measure of value. The amount of the currency and the requirements of the country would always be commensurate; that is, the currency would increase and diminish according to the natural law of supply and demand.

That there may be no inflation of the currency by the increase of the issue of National Bank notes, let the government cancel the legal tender notes as fast as the comptroller issues currency to National Banks, and continue the work until there are no legal tender notes in circulation.

NEW BOOKS.

A RAMBLE ROUND THE WORLD. 1871. By M. Le Baron de Hübner, formerly Ambassador and Minister, and Author of "Sixte Quint." Translated by Lady Herbert. Pp. 657. Price $2.50. New York: Macmillan & Co. 1874. Phila.: Porter & Coates.

A bare glance at the short preface and the table of contents of this volume gives assurance that we have opened a book of travel of unusual interest. Despite the somewhat misleading title of the translation, we find before us the notes of no aimless and desultory rambler about the earth, but of an intelligent and energetic tourist who has set out on his pilgrimage with a clearly defined purpose, and who, as we can judge from the dates and list of places given in his itinerary, has made the most of his eight months between Queenstown and Marseilles. In a few vigorous sentences, which at once place us on good terms with our guide, we see the objects of our journey distinctly set forth. Our purpose is: "To behold, beyond the Rocky Mountains, in the virgin forests of the Sierra Nevada, civilization in its struggle with savage nature; to behold in the Empire of the Rising Sun, the efforts of certain remarkable men to launch their country abruptly in the path of progress; to behold, in the Celestial Empire, the silent, constant, and generally passive—but always obstinate—resistance which the spirit of the Chinese opposes to the moral, political, and commercial invasions of Europe." Yet our guide will not always be engrossed with his philosophical objects. On the way he means to amuse himself; that is, to see all he can which is curious and, to him, new; and every evening he will note down in his journal what he has seen and what has been told him during the day. On such a tour and in such company we may be sure that our time will be passed profitably and pleasantly. In fact the volume from its opening sentence to its close contains few, if any, pages which the reader will find dull or will care to "skip," while it contains many pages which will bear to be re-read. Opening it at random, we extract the following passage to illustrate the author's style of narration and habits of thought.

"It has often been remarked by travelers how much the sol-

emnities of the Buddhist temples resemble the ceremonies of the Catholic Church. Close to this hall is a sanctuary of Buddha—a sombre, narrow, but immensely high chapel, entirely filled by the colossal statue of the god. The darkness adds to the terrors of the spot. To see the details, and reach up to the huge ears and shoulders of the divinity, we must go up several stories.

"Alongside are the apartments, now in ruins, which the Emperor, Yung-mên, built for his thirteen sons, to prepare them for an existence which was more claustral than princely. The rooms, opening out of a corridor with circular doors, are very small, but rich in pretty details. The house is built against the northern wall of the town. I cannot say how delighted I was with this fine but savage picture.

"The great interest of the day, to me, was the striking contrast between the Temple of Reason and the Sanctuary of Faith—between intellectual exercises and ascetic practices—between philosophic speculations and superstitious belief—in a word, between Confucius and Buddha.

"Pass from a Wesleyan chapel, with its four bare walls, to the pulpit of St. Peter's during pontifical high mass, and you will find a less striking difference. Confucius was a moralist. He gave maxims and counsels full of wisdom; but politely declining the discussion of a future state, he sought the source of good and evil in the reason and will of each soul." (p. 493.)

We cannot, however, dismiss the volume with unqualified praise. On a tour like this, in the pursuit of knowledge, it is not enough that our guide is entertaining, that he can draw, on occasion, from a varied store of learning, and that his judgments are generally marked by solid sense. It is likewise requisite that he shall observe circumspectly, that he shall be cautious with respect to the sources from which he draws information, and above all that he shall so temper his descriptions as to leave on his reader's mind a true image of things as they may actually be seen, not a distorted and discolored picture. In the course of his chapters on America we are able to test him on these vital points, and the result is not wholly satisfactory. Not that we can find fault generally with his comments on things American, which are as free as possible from any taint of foreign prejudice, but occasionally we meet with passages which lead us to suspect that sometimes in the fervor of composition he has yielded too readily to his imagination, and has subordinated strict accuracy of statement to effectiveness of coloring and setting. We are speaking of the impressions we are to gain through him of foreign places and customs. Let us ask what impression of America his European reader is to gain from a passage like this:

"In the journey from New York to the official capital of the United States, there is nothing which strikes the traveler as very

different from what he meets with in an ordinary European railroad. But when we turn our steps towards the West, the look of our fellow-travelers gradually changes. Bankers with their clerks, elegantly dressed ladies from Boston, Philadelphia, or Baltimore, officials from Washington—all those people, in fact, whose cosmopolitan aspects remind one of their like in Europe, disappear from the scene. They are replaced by a lot of men, mostly young, bearded, ill-dressed, not over-clean, armed with one or sometimes two revolvers, wearing round their waists great coarse woollen bags, which are generally empty when they are starting for the Far West, and as commonly full of gold on their return." (p. 31)

This is the opening portion of the chapter which narrates our traveler's journey from Washington to Chicago. In the course of the same chapter we read the following passage: "From time to time the brakesmen rush upon the platform, drag the wheels, put on the brakes, and disappear again by slipping into the next carriage. To judge by their hurry, you would think it was a question of life or death. The guard, too, passes and repasses, never without a gracious smile or a courteous word to me, as 'Now, Baron,' or, 'Well, Baron, you're not gone to bed.' Sometimes, as a variety, he says nothing, but merely presses my hand. Each time I ask him, 'Well, how fast are we going, Mister?' And his answer invariably is, 'Sixty miles an hour, Baron.'"

Again, on the Pacific railroad, "We are going from fifty to sixty miles an hour, and the conversation does not flag."

A few such passages as these ringing in our ears detract somewhat from the confidence with which we follow our guide from the known to the unknown—out through the Golden Gate, across the broad Pacific, among the unfamiliar scenes and customs of Japan and China. It is difficult not to be fascinated by his narrative, but we are never quite certain where to draw the dividing line between naked truth and its rhetorical embellishments.

If we have laid great stress upon this weak point in the volume before us, it is because it professedly belongs to the first order of books of travel, and deserves, therefore, to be judged by a high standard.

THE AMERICAN EDUCATIONAL ANNUAL. A Cyclopædia or Reference Book for all matters pertaining to Education, comprising a history of the past and present school systems, and school legislation in all the States and Territories; a History of Land Grants and the Peabody Fund; Geographical and Scientific Discoveries during 1873–4; the National Bureau of Education; Civil Rights Bill; Educational Gatherings during 1874; Educational Systems in other countries; Voluminous American school statistics for several years past; names of American Colleges,

Universities, Theological, Normal, Local and Scientific Schools; names of Educational Journals; Sketches of Prominent Educators deceased during 1873–4, and lists of School Books published during the year. Published annually. Vol. I. 1875. New York: Schermerhorn. Philadelphia, Bancroft. (Pp. 291, 8vo.)

This sesquipedalian title almost takes away one's breath, and yet it does not give all the contents of the book itself, for the State Superintendents have given brief biographies, prefacing the report of their State work,—in which there is furnished forth a fair transcript of the way in which the art of pedagogy is acquired in this country. The only one as to whose antecedents we are left uninformed is the Hon. H. N. Bolander, State Superintendent of Public Instruction in California, who was kind enough to forward his tickets when running for office, but has failed to make a single response to letters constantly written to him from the 22d of May, until the 10th of September, (enclosing numerous prepaid envelopes); a touch of pathos this last, and altogether suggestive of the way in which such items are made and gathered up to show our present condition. However, it is gratifying to find that the men entrusted with the business of superintending education throughout the States of the Union, are for the most part men of fair training and good opportunities of instruction, while the few exceptions seem to be those who have atoned by zealous hard work for the want of early advantages. There seem to be among them representatives of all races, black, white, mixed, Indian and half breeds, of all nationalities, Scotch, German and natives of all our States and Territories, of every religious creed, of both sides in the recent great struggle, Confederate and Union, and yet they are working on in unconscious harmony, to secure the best schools they can, for the small power given them by law. In only one case, that of Connecticut, is there any evidence of an endowment derived from the Western lands, once and again scattered with such lavish waste on all sorts of objects, and even there it is supplemented by a tax well used and cheerfully paid. The great array of facts and figures gathered in this volume, serves to show how little of the real spirit of public education can be learned by a mere statistical display. We all know just where to put our fingers on the States in which Free Schools have made a prosperous population, and on those in which ignorance has been sedulously cultivated, yet as long as the comparative returns are only those of each State in various years, it is impossible to see where the fault lies and where the remedy is to be found, why one Commonwealth should be full of zeal for education and another lagging far behind. The cause like the result must be traced in the local history of our separate sections, and it will take generations yet to come, to correct the faults of the past.

But more than all, we know that mere returns of figures show nothing of the methods of education. The whole country is full of imperfect systems, undigested plans, inchoate schemes, intended to render easy the difficult problem of national education. The mere multiplication of what we are pleased to call colleges and universities, is no more an evidence of a real improvement in the higher education of our young men than is the existence of wholesale laws to provide schools for a whole population, when the laws are not enforced and no provision is made of school houses, teachers, and the other primary requisites of popular instruction. Even the existence of splendid school buildings is only evidence of good intentions, and not at all of their satisfactory execution. Still there is a glow of enthusiasm in the statement reported from Colorado, that starting with nothing in 1866, to-day it has one hundred and thirty school houses, valued at more than $300,000, sixteen thousand school children, and two hundred and fifty-two teachers; that Denver boasts three $80,000 school buildings, with a fourth in progress, and that Black Hawk and Central City, both mining towns in the very heart of the Rocky Mountains, and within twelve miles of the snowy range, comp eted in 1870, the former a $15,000 and the latter a $20,000 publlic school house, the first in the territory. Poor rock-bound Arizona reports the value of its school houses and furniture in 1873–4 at $6,247.00, with three hundred and forty-three scholars out of one thousand six hundred and sixty children in the territory between 6 and 21; but the Governor and ex-officio Superintendent of Public Instruction, reports in July of 1874, that 'we now have free schools in every district in the territory,' and that there will be revenue enough to maintain them at least six months in every year.

The work of the Peabody Fund is a matter well worth studying, as it shows how efficiently men will help themselves when help is given to them only on condition of their doing all they can first. Out of their income of $120,000, the trustees give at most to a school of 100 pupils $300; to one of 200, $600, and so on; but this is always on condition that the district shall pay at least twice, and usually much more than twice, the amount given from the Peabody Fund.

The value of such a volume is in no wise in proportion to the space assigned to the various subjects contained on its long lists, but it is at least a good thing thus to begin to collect and collate school facts and statistics in such a manner as to supply a fair survey of what is being done in all the states of the Union, and to supply, too, some means of comparison with foreign systems and methods.

Brief, hasty and imperfect as are the sketches of education in other countries, the subjects are well chosen—Austria, England,

France, Japan, Prussia, Russia, and Switzerland—but one must know more of the subject than the compiler to be able to read between the lines, and to see that in Russia, for example, education is as yet only slowly finding its way into that vast empire, while in Germany it is no longer a question of quantity but of quality, the last, best, almost final condition of the problem. Here we are still busied in the earlier stage of trying to find out how we can reach the most pupils, and the "Annual" serves to show how it is done; but we must look to some other and higher authority to learn how much we give our pupils in the way of real education, and how far there is any real growth in education other than mere numbers.

THE SPECTROSCOPE IN ITS APPLICATION TO MINT ASSAYING. By Alexander E. Outerbridge, Jr. Read before the Franklin Institute, October 21, 1874.

The authorities of the Mint have for some time past been carrying on a series of experiments under the supervision of Mr. Outerbridge, aiming at the discovery of a gold test by the use of the spectroscope. The present method of assaying is complicated, laborious and expensive, and it was hoped that the instrument which had proved so marvellous a guide as to the qualitative composition of bodies, might discover like power quantitatively.

Similar experiments are being carried on at the Royal Mint by by Messrs. Roberts and Lockyer. Indeed, the theory of such a quantitative analysis originated in the observation of Mr. Lockyer that, upon causing the spark from an induction coil to leap a greater distance through the air by separating the electrodes, the lines of the spectroscope were broken in the middle and that the hiatus varied with the different alloys. Mr. Lockyer argued from this that the fineness of various alloys could be determined by the length of the broken lines.

Mr. Outerbridge, after thorough investigation, is satisfied that this process, though it does indicate roughly—we speak comparatively—the differences in alloys of the precious metals, will not serve as a reliable test. The eye cannot detect the differences in the length of the spectral lines in alloys varying in fineness within 7-1000ths. Besides a more substantial reason, that the amount of metal tested in a spark is inappreciably small, and could not represent the fineness of an ingot with certainty. It results, therefore, that the spectroscope cannot be relied on as a means of quantitative analysis; but the reader of Mr. Outerbridge's paper will find that many observations made in reaching this conclusion give the investigation a positive as well as a negative value.

EULOGY ON CHIEF JUSTICE CHASE, delivered by Wm. M. Evarts, before the Alumni of Dartmouth College, at Hanover, June 24, 1874. Published at their request. Hanover, N. H. J. B. Parker. 1874. Paper, 8vo., pp. 30. [J. B. Lippincott & Co.]

The American youth is not stirred up to the importance of good and useful citizenship by the frequent sight of bronzes on the street, commemorating such lives of departed countrymen. But the intense pride and interest which the Grecian cities felt in their worthier citizens, his Alma Mater feels for every distinguished son. Her kindly eye follows him on his way up, choosing him now as an examiner, now as an orator, now as a trustee, and finally honors his memory by a eulogy pronounced in the presence of her whole family. The life of Chase is peculiarly fit to set before the young as an example. It was no mushroom growth, but the slow development and training of an honest, courageous and able mind ever in one line. Without flying here and there after the prize of the present, he gave himself for ten years after his admission to the bar, entirely to his profession. For the next twenty years he devoted himself to the Anti-Slavery cause prominently in the offices of his own State and in Congress. Trained by these years of constant and thorough labor, he was lifted with the Republican party by the war to the very crest of power.

The Republican party, however it may have changed since, displayed a splendid front at the beginning of the war. It had the purity and honesty of long defeat, and the courage and humanity that spring from devotion to the cause of the oppressed, and it numbered among its leaders, Lincoln, Seward, Stanton, Sumner, Chase, the greatest men of our country.

From the position of Secretary of the Treasury he was called to that of Chief Justice of the United States. Only lawyers can appreciate how solid must have been the legal acquirements of the first ten years of his life, which after an interval of over twenty years supported him with distinction and respect in the highest judicial position in the country.

Mr. Evarts touches upon, without explaining, the inconsistency between Mr. Chase's views as Secretary of the Treasury and as Chief Justice, as to the legal tender question. Mr. Chase himself said that although in favor of the issue of greenbacks, he was reluctantly forced into consenting that they should be made a legal tender. But whether this be so or not, what manly men most admire is independence of opinion, and the clearer the change in opinion appear, the more courage it required for the Chief Justice to avow it.

No better narrator could be found of Mr. Chase's conduct when presiding in the Senate Chamber over the trial of the impeach-

ment of President Johnson, than Mr. Evarts, who took so prominent a part in it himself. To the judicial firmness and impartiality of the Chief Justice, above all else, the orator attributes what, when the passion of party is past, we must consider a national blessing, the acquittal of the President.

Many a man has gained success, and the highest success, suddenly, but to deserve distinction, and to ornament it when attained, demand the moderation, fortitude, learning and experience that are the children of toil.

NATHANIEL VAUGHAN: PRIEST AND MAN. By Frederika Macdonald. 12mo., cloth, pp. 404. Price $1.50. New York: Asa K. Butts, [J. B. Lippincott & Co.]

We took up this book for review with very decided feelings of aversion; whether from something in the title, or from the "get up" of the book, which is cheap, we cannot tell.

It is the story of a clergyman of the Church of England, settled in a retired village, his immediate neighbors being, with few exceptions, ignorant and rather brutish peasants. He is a Ritualist; and our author's hatred of Ritualism, of conservatism, and of social order in general (for she is evidently a lady of "advanced" opinions) forms the key-note to the book. Indeed, it would not be unjust to say that she personifies Ritualism, calls it the Rev. N. Vaughan, and by making the man as disagreeable as she possibly can, shows her disgust for the thing he represents.

The book is principally concerned with an analysis of this man's character, enough of his life being told, of his desires and aims at the opening of his career, of the opinions he adopted, and the standard he set up to judge himself and other people by, to illustrate each step in his development, and to lead up naturally to the crisis of his life. For we must say this part of the novel is very well managed, and, putting aside the exaggeration which the author's method inevitably produces, there are doubtless men in existence very similar to poor Mr. Vaughan—men who, beginning by persuading themselves of the truth of opinions which they call the teaching of the church, and which to us seem almost blasphemous, and then subjecting themselves to rigid self-examination, end by becoming like morbid, unhappy, *sickly* specimens of humanity, as this clergyman.

The other and less prominent male characters are a Mr. Fabrice, a free-thinker; Hugh Braham, whose early life and education are guided by Mr. Vaughan, but who breaks loose from him, and is won over by Satan, in the shape of Mr. Fabrice; and several others who are of no special importance. Two of the most prominent female personages are a daughter of Mr. Fabrice, to whom the author, without rhyme or reason, gives the silly name of Missy

Fay, and a servant of Mr. Vaughan's, Faith by name, brought up in his peculiar system. Hugh and Miss Fabrice fall in love with each other, and the frequent descriptions of how they looked into each other's eyes, how they talked, and how they sat silent, etc., etc., are sufficient to spoil the best novel ever written.

But this is by no means the only love story of the book, for Faith, the servant girl, has the audacity to love her master, (who is too preoccupied with his own troubles ever to guess at such a state of affairs,) and hates everybody whom she conceives to stand between her and him with all the warmth of a sensual and jealous nature—especially Miss Fabrice—and Mr. Vaughan's hopeless passion for the latter makes the fourth love affair. Notwithstanding that he believes her to be on the high road to perdition, and that she scorns him and all he thinks most worth living for; above all, notwithstanding his belief in the doctrine of clerical celibacy, and his conviction that his besetting sin is his desire to marry this girl, it is this passion that masters him, and that drives him to the very verge of crime.

Of course, he sees the mutual love of Hugh and Miss Fabrice, and mourns over it, as he thinks, on account of its manifest impropriety. Further, by a marvelous course of reasoning, which, however, we imagine to be not altogether untrue to nature, he persuades himself that it is his duty to God to stop the marriage by fair means, which he uses at first, if possible; or, failing these, by foul means, to which he at last resorts.

As it becomes more certain that Hugh's love is returned, so does Mr. Vaughan's hatred for the young man increase; and the picture of the unhappy wretch stalking about at night, carrying an immense club, and breathing battles, murders and sudden deaths, is anything but pleasant to contemplate. He is saved from what the reader feels sure is the fate marked out for him by a dream, which does thoroughly awake him to a sense of his danger, and a glimpse of common sense being vouchsafed him by Providence, (in whom, to do her justice, our author evidently has some kind of belief,) he determined to flee from temptation, which we are quite sure we should have done long ago, if in his place, and going to the continent, after some wanderings, enters a monastery, where we lose sight of him.

There is one character we have purposely left to the last, as it is decidedly the best in the book; we mean Winifred Deane, a little child, of whom Mr. Vaughan assumes the guardianship, and whose story is told very sweetly. Though an uncommon and, to adopt the nursery phrase, an old-fashioned child, her character is very lifelike, and her childish fears and perplexities, her fixed purpose of finding the sister from whom she has been so cruelly separated, and especially her undoubting belief in the accomplishment of her object, show a considerable knowledge of child-

character; while a certain heartiness in the style whenever she is writing about the child, evinces a love for children in the author which will appeal to all who are capable of appreciating their innocence and beauty.

Altogether the book is decidedly superior to the average novel of the present day, though we do not like the object of it, or approve of all the sentiments the author takes most pains to inculcate; but, while we see she has endeavored to model herself, at least in her analysis of character and motive, upon "George Eliot," we cannot agree with the *Westminster Review* in thinking the book worthy to be one of that author's earlier efforts, and do not anticipate that it will find many appreciative readers.

BOOKS RECEIVED.

Tables for the Determination of Minerals by those physical properties ascerainable by the aid of such simple instruments as every student in the field should have with him. Translated from the German of Weisbach. By Persifor Frazer, Jr., A. M. Philadelphia: J. B. Lippincott & Co.

A Brief account of the Finances and Paper Money of the Revolutionary War. By J. W. Suckers. 1874. Philadelphia: John Campbell & Son.

The Maid of Orleans, an Historical Tragedy. By George H. Calvert. Crown 16 mo. gilt. Pp. 134. New York: Geo. Putnam's Sons.

For Better, For Worse. A tale of First Love: from "Temple Bar." Price 75 cents. T. B. Peterson & Bro. Philadelphia.

History of the Conflict between Religion and Science. By John W. Draper, M. D., L. L. D. The International Scientific Series XII. New York: D. Appleton & Co. Philadelphia: Porter & Coates.

The Phantom of the Forest: a Tale of the Dark and Bloody Ground. By Emerson Bennett. 12 mo. cloth. Pp. 503. Price $1.50. Philadelphia: Claxton, Remsen & Haffelfinger.

Justin Harley: A Romance of Old Virginia. By John Estin Cooke. Illustrated by W. C. Shepperd. 12 mo. cloth. Pp. 301. Price $1.75. Philadelphia: Claxton, Remsen & Haffelfinger.

Thoughts on Revelation, with special reference to the present time. By John M'Leod Campbell. 12 mo. cloth. Pp. 200. Philadelphia: Claxton, Remsen & Haffelfinger.

Conchologia Cestrica. The Molluscous Animals and their Shells, of Chester county, Pa. By William D. Hartman, M. D., and Ezra Michener, M. D., with numerous illustrations. 12 mo. Pp. 114. 1874. Philadelphia: Claxton, Remsen & Haffelfinger.

Reminiscences of George La Bar, the centenarian of Monroe county, Penna., and incidents in the early settlements of the Pennsylvania side of the river valley from Easton to Bushkill. By A. B. Burrell, with a portrait. Crown octavo. Pp. 111. Price $1.00. Philadelphia: Claxton, Remsen & Haffelfinger.

Historical Chart, or History taught by the eye. By Robert H. Lamberton. Philadelphia. Claxton, Remsen & Haffelfinger.