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Geology—The Creation.

There are two classes of Geologists—at least among the whole body of them there are—one class believes in the deity of matter; the other in the Infinite Great Deity and Intelligent Creator of all matter, and the Maker of all the laws which govern its operations. The author of "The Vestiges of Creation," together with Prof. Oken, and others, have taught the doctrine that all life is progressive,—that it commenced at a point, and, through a long series of ages, step by step, arose from the lowest conceivable points of life. It is even asserted that the primary man was a dolphin—and all such nonsense. This class of geologists, as a fundamental proof of the correctness of their theory, stated that no animals of a high class of intelligence had ever been found in the Old Red Sandstone formations. It was a most flagrant blunder to predicate the theory of intelligent animals, springing successively from a low class of animated nature, because the latter only were found in the lower formations, for this is a mere fact, and is not accounted for itself. But this fact (supposed) to the author of the "Vestiges of Creation," has been riven from his doctrinal escutcheon, and proven to be a fixed falsehood. Hugh Miller, the Editor of the "Gospel Witness," in Edinburgh, Scotland, the author of "The Old Red Sandstone," "Footprints of the Creator," &c., who was once a stone mason, has, with a ponderous hammer of intellect and research, broken to pieces the whole theory of the materialists with as much ease as he used to break stones in Cromarty quarry. Every one should read his "Footprints." Another new discovery has added strength to his researches. Until last year, no vestiges of any reptile had ever been discovered in the series of deposits, called the Old-Red or Devonian formation, which is asserted to belong to a period far more ancient than the coal measures. At a late meeting of the British Geological Society, a paper was read by Dr. Mantel, giving an account of the discovery, in the crystalline yellow sandstone of the Old-Red, near Elgin, in the north of Scotland, of a series of thirty-four foot-prints of a turtle, after which, in the same strata, the remains of the skeleton of a small four-footed reptile was discovered by a Mr. Patrick Duff. This skeleton is the oldest fossil reptile yet discovered. It resembled, in some of its osteological characteristics, the small lizards. It was seven inches in length, resembling a water salamander, but with a broader back and longer limbs. It was capable of moving very fast on land and water. It has been named the *Telerpeton* (very old reptile) *Elginense*. This discovery will be of great interest to those who give attention to Geological studies. This discovery should teach men to be very cautious respecting the building of theories upon very slender data—upon suppositions.

Two courses of lectures have been delivered in this city (one not yet completed), on Geology: the one by Dr. Antisel and the other, by Prof. Guyot, of Cambridge, Mass. It had been said that Dr. Antisel inculcated the doctrine that Geology contradicted the Mosaic account of the Creation; and that Prof. Guyot was brought here to prove that Geology harmonized with the Scriptures—that it agreed literally with the first chapter of Genesis. The teachings of both have been about the same, only that Dr. Antisel, we think, is the most interesting lecturer, owing to his being a fluent speaker; both of them are learned and able men, but neither of them lectured to prove the harmony of Geology and the Scriptures—that is taking the first chapter of Genesis, word for word. They believe—not an original idea with either of them—that the days of Creation, mentioned in the said chapter, mean *periods of time*; neither of them even endeavored to prove that Geology agreed literally with the first chapter of Genesis. It is very easy to speculate in science; the said chapter of Genesis says "the evening and the morning were the first day," "the evening and morning were the second day," and so on

for the six days, and then, literally, "the Sabbath day," which the Jews were commanded to keep literally. If the first six days were periods of time, we must not except the seventh day, which, ever since, has been a *period* of time, measuring, literally, twenty-four hours. That is the way we reason; and we believe it were just as easy for the world to be created in six days, as in six centuries—literally, however, as a matter of practical science, there is still a wide field for exploration and study on this subject before us; and it would be well for those who have opposite views to be very modest in their assertions, for we can only speculate, but never determine, how the world was created.

Town and Country.

By our modern improvements of railways, a great and grand system of international communication has been opened up. Places that were once separated by a journey, in winter, of three or four days or weeks, are now united together by a journey of the same number of hours or days. This is pleasant and should be profitable. During the long and severe winters, when there were no railroads, the cities had to depend for their winter supplies of provisions on trains of sleds or wagons, which, by slow and expensive journeys, found their way to greedy markets. It would be supposed that the influence and convenience of our railroads would have been of great benefit to our farmers, and the dwellers of our cities also. To our farmers—those living remote from cities, it is reasonable to suppose that they would now have a little more profit for their products, they having no long journeys to make, and the citizens have their provisions, &c., at less prices: that is, enjoy reciprocal benefits. This really is not so. We have been told that while provisions have been very high in our city this winter, the farmers in Illinois and Wisconsin have been selling their wheat as low as two, and two shillings and sixpence per bushel. There must be something wrong somewhere. It must be that a class of middle-men—mere traders, have arisen along our railroads, who by having a large capital at command, control the markets to the injury of our farmers, our mechanics, and the business people in our cities. The farmer and mechanic are twin brothers, their interests are one, for both produce commodities which they can exchange to mutual advantage. The blessings of railroads, so as to bring agricultural products to our markets to exchange for mutual benefit between the *producers*, we are afraid, are negatived by the class of men alluded to.

Potatoes are selling in this city for ten shillings per bushel, while in the interior of this very State they are selling for three, and in many places, we are told, for two shillings. Railroads are miserable dear carriers, if they cannot take potatoes three hundred miles for two shillings per bushel. It is easy to pack potatoes so as to preserve them from being frozen in the cars in the coldest weather. Take saw-dust, dry it in a kiln, and pack potatoes in boxes with a thick stratum of it around them, and there is no fear of their freezing. We speak of this thing so as to direct the attention of our farmers to the subject, for we have no doubt but all of them who have been receiving such poor prices for their products, have been thinking that we citizens have been enjoying the benefits of the same.

Telegraphs—Principles of Patents—Judge Kane's Decision.

In the last number of the Scientific American there is an article by Mr. H. Aiken, criticizing our review of Judge Kane's decision. It maintained that the said decision was right, and that the views we entertained respecting it were wrong. As some may be led to adopt wrong views from the said letter, and as the writer of it, along with the honorable Judge and others, have adopted wrong views in respect to the principles of patents, we will dwell particularly on the *point of error*, after having brushed off a few of Mr. Aiken's wrong statements.

He says that when Mr. Bain applied for his patent, "the Commissioner (Edmund Burke) refused it and referred him to the invention of Morse, stating that it was an improvement on it—the late decision of Judge Kane confirms

this decision." Mr. Burke never made any such decision, the question that he decided upon was an interference between Morse and Bain for two chemical telegraphs, Morse having invented one and made application for a patent. Morse's chemical telegraph was a mere toy, got up for the purpose of preventing another inventor from using a good invention—a course of conduct, we must say, too often pursued by one inventor or his interested friends towards another. If Mr. Aiken had been acquainted with the subject, he would not have made such a mistake; and here let us say, too many adopt views on all subjects without a due examination of them, and this we think was done in respect to the decision in the case referred to. We must say, and say it with all respect, that the principles of the Patent Laws are but imperfectly understood generally, because not studied logically, sincerely, and thoroughly.

What were the Patent Laws enacted for? To encourage useful inventions, discoveries, and improvements. What is a patent? A certificate of the United States Government, that the person—inventor—named in it has invented the new and useful improvement described in that specification of the patent. A patent is not granted for a certain thing done first; it is for the *new machine* which does a certain thing in a certain way. We are particular about this, for this is the error into which Mr. Aiken has fallen, and gets confounded in his ideas because he has not a simple and clear principle for a fundamental basis. He said Mr. Morse first recorded messages at a distance by electricity, therefore no other one has a right to record messages by electricity. This point was pressed upon Judge Kane by the counsel for Morse, and his decision shows he adopted it. We wish to analyze this doctrine and show how very wrong it is, and how contrary to the principles of justice, and the laws of patents.

"The recording of messages at a distance by electricity" is not an invention, it is a mere declaration of what an invention does or can do—it is no more. If this declaration was the invention—the thing patented—all that the patentee would have to do in the case of preventing others from using it, when he applied for an injunction, would be to prove, by witnesses, that *he is the man who first recorded messages at a distance by electricity*, that is all—the man, then, who recorded the message first, would be the subjective evidence, the thing done the objective evidence, and the machine which did it, an outsider. This would indeed be a queer way of deciding patent cases; it is totally contrary to the method of procedure in deciding upon them, but it is exactly in accordance with the decision of Judge Kane. It has not a rag of logic to commend it. We are the advocates of the rights of inventors; we like to see pirates punished, but we say one inventor has as good right to his own specific invention as another, whether the other be an older inventor or not. An invention is the thing patented—the specific machine, not an abstraction—not a mere declaration of what it has done first. The decision of Judge Kane makes "the declaration of what a machine—this invention—does," the thing patented. Although Mr. Aiken adopts this *ignus fatuus* as a principle of patent law, he does get confounded and confused when he says:—"The object designed and result produced, by both Telegraphs, are the same (that is, to transmit messages), and the working instruments, in both cases, are precisely the same; that is, the marks are made by the point of a metallic instrument in both cases. The distinctive features of the respective inventions of Morse and Bain are the following: Morse marks the paper by an indentation; Bain marks the paper by coloring it without an indentation; Morse's marking instrument acts by moving; Bain's marking instrument acts without moving; Morse uses two conducting wires,—Bain uses one conducting wire. In both cases the paper, prepared to receive the impression, is moved under the marking instrument by machinery, prepared for the purpose, with equal regularity in each machine.

Morse's invention is valuable, and this title is good, if his claims are rightly made; Bain's invention is valuable and his title also good, if

his claims are rightly made; but Bain cannot lawfully use any part of Morse's invention without his consent."

These remarks are to the point, because they consider the respective inventions not the *declaration* of what they can do, or do. But it is entirely wrong when he insinuates that the *recording pen* is either the invention of Morse or Bain. It is the invention of James Watt. He employed a *recording pencil* to mark his indicator card—it was a steam recording instrument, and here be it observed that the very first recording pen used by Morse was the *pencil*; and in 1837 the marks of his recorded messages were continuous angles; Watt's pencil traced his card in curves. In that year Steinheil had a recording telegraph in operation, which made dots and dashes. Abbe Moigno says it was invented in 1831 when Mr. Morse was in Europe, and one year before Mr. Morse claims to have had a single idea of his telegraph. We, however, take it from Mr. Vail's work that this recording telegraph of Steinheil was completed and working in 1837, and that it was more perfect in its action than Mr. Morse's telegraph at that time. But if Steinheil did invent his recording telegraph in 1831, we never could, in justice, advocate his right exclusively to a *recording telegraph*. He had a right to his specific machine, so has Morse, so has Bain, whether the one be older than the other or not, and as all these telegraphs are entirely different in construction, arrangement, and action, (Mr. Aiken does not describe the difference) it follows they are distinct inventions, and each inventor should be allowed the full privilege of making, using, and vending his distinct invention where he pleases. If Mr. Morse had discovered electricity, there might be some justice in claiming the *recording of messages* by it as altogether his invention, but a number of telegraphs had been invented ten years before he thought of such a thing, and for Mr. Aiken to say that he first made a double acting telegraph, betrays a great want of knowledge on the subject.

Electricity has two powers, one mechanical and the other chemical, Morse uses the mechanical power, Bain the chemical. They are entirely different, there is no identity between the two telegraphs, Morse's could not do what Bain's does, nor could Bain's do what Morse's does. Neither Morse nor Bain discovered these principles of electricity; they were discovered by others, and here let us observe, the principle of electricity which Bain uses is the oldest; it was discovered long before electro-magnetism.

If the spirit of Judge Kane's decision be carried out, it will raise a barrier to improvements in the arts and sciences, and defeat the very objects of our Patent Laws. Mr. Aiken affords us argument for this; the principle he adopted as the *point of patent* decisions, drives him, of necessity, to the miserable conclusion of placing the barbaric Chinese mode of printing over the splendid discoveries of Guttenberg, and would send us back to the dark ages; places the twirling of a thread on a stick above the invention of the spinning jenny; the loom of the Hindoo over the powerloom of Cartwright; the elipile of Hero over the wonderful steam engine of Watt; and the steamboat of Hull over that of Fulton. The decision of Judge Kane is a daring presumption against the general rights of inventors; it sets the recorded message of Morse above the majesty of that finger which came from Heaven and recorded a message upon Belshazzar's palace wall. We believe that many poor and honest inventors have been deprived unjustly of their rights by such decisions. Let every man use his own invention if it is not identical with an older one, as Bain's is not. We care not for one inventor more than another; if we saw a man use Morse's electro-magnet as combined with his vibrating pen (his whole invention) we would speak out as strongly in defence of his rights; and have done so. We believe that the *decision*, and the compromise which has resulted from it, have deeply injured the rights of an inventor; it may look all prosperous just now to those who, in their worldly wisdom, have planned things apparently for their own success and benefit, but we have strong faith in the ultimate triumphs of justice.