

gem in it, which he looked through, and watched the sword-play of the gladiators,—men who killed each other to amuse the people,—more clearly than with the naked eye. So Nero had an opera-glass.

So Mauritius the Sicilian stood on the promontory of his island, and could sweep over the entire sea to the coast of Africa with his *nauscopite*, which is a word derived from two Greek words, meaning “to see a ship.” Evidently Mauritius, who was a pirate, had a marine telescope.

You may visit Dr. Abbot’s museum, where you will see the ring of Cheops. Bunsen puts him five hundred years before Christ. The signet of the ring is about the size of a quarter of a dollar, and the engraving is invisible without the aid of glasses. No man was ever shown into the cabinets of gems in Italy without being furnished with a microscope to look at them. It would be idle for him to look at them without one. He couldn’t appreciate the delicate lines and the expression of the faces. If you go to Parma, they will show you a gem once worn on the finger of Michael Angelo, of which the engraving is two thousand years old, on which there are the figures of seven women. You must have the aid of a glass in order to distinguish the forms at all. I have a friend who has a ring, perhaps three quarters of an inch in diameter, and on it is the naked figure of the god Hercules. By the aid of glasses, you can distinguish the interlacing muscles, and count every separate hair on the eyebrows. Layard says he would be unable to read the engravings on Nineveh without strong spectacles, they are so extremely small. Rawlinson brought home a stone about twenty inches long and ten wide, containing an entire treatise on mathematics. It would be perfectly illegible without glasses. Now, if we are unable to read it without

the aid of glasses, you may suppose the man who engraved it had pretty strong spectacles. So the microscope, instead of dating from our time, finds its brothers in the books of Moses,—and these are infant brothers.

So if you take colors. Color is, we say, an ornament. We dye our dresses, and ornament our furniture. It is an ornament to gratify the eye. But the Egyptians impressed it into a new service. For them, it was a method of recording history. Some parts of their history were written, but when they wanted to elaborate history they painted it. Their colors are immortal, else we could not know of it. We find upon the stucco of their walls their kings holding court, their armies marching out, their craftsmen in the shipyard, with the ships floating in the dock; and, in fact, we trace all their rites and customs painted in undying colors. The French who went to Egypt with Napoleon said that all the colors were perfect except the greenish-white, which is the hardest for us. They had no difficulty with the Tyrian purple. The burned city of Pompeii was a city of stucco. All the houses are stucco outside, and it is stained with Tyrian purple,—the royal color of antiquity.

But you never can rely on the name of a color after a thousand years. So the Tyrian purple is almost a red,—about the color of these curtains. This is a city of all red. It had been buried seventeen hundred years; and if you take a shovel now, and clear away the ashes, this color flames up upon you, a great deal richer than anything we can produce. You can go down into the narrow vault which Nero built him as a retreat from the great heat, and you will find the walls painted all over with fanciful designs in arabesque, which have been buried beneath the earth fifteen hundred years; but when the peasants light it up with their torches,

the colors flash out before you as fresh as they were in the days of St. Paul. Your fellow citizen, Mr. Page, spent twelve years in Venice, studying Titian's method of mixing his colors, and he thinks he has got it. Yet come down from Titian, whose colors are wonderfully and perfectly fresh, to Sir Joshua Reynolds, and although his colors are not yet a hundred years old, they are fading: the colors on his lips are dying out, and the cheeks are losing their tints. He did not know how to mix well. All this mastery of color is as yet unequalled. If you should go with that most delightful of all lecturers, Professor Tyndall, he would show you in the spectrum the vanishing rays of violet, and prove to you that beyond their limit there are rays still more delicate, and to you invisible, but which he, by chemical paper, will make visible; and he will tell you that probably, though you see three or four inches more than three hundred years ago your predecessors did, yet three hundred years after our successors will surpass our limit. The French have a theory that there is a certain delicate shade of blue that Europeans cannot see. In one of his lectures to his students, Ruskin opened his Catholic mass-book, and said, "Gentlemen, we are the best chemists in the world. No Englishman ever could doubt that. But we cannot make such a scarlet as that; and even if we could, it would not last for twenty years. Yet this is five hundred years old!" The Frenchman says, "I am the best dyer in Europe: nobody can equal me, and nobody can surpass Lyons." Yet in Cashmere, where the girls make shawls worth thirty thousand dollars, they will show him three hundred distinct colors, which he not only cannot make, but cannot even distinguish. When I was in Rome, if a lady wished to wear a half dozen colors at a masquerade, and have them all in harmony, she would go to the Jews; for

the Oriental eye is better than even those of France or Italy, of which we think so highly.

Taking the metals, the Bible in its first chapters shows that man first conquered metals there in Asia; and on that spot to-day he can work more wonders with those metals than we can.

One of the surprises that the European artists received, when the English plundered the summer palace of the King of China, was the curiously wrought metal vessels of every kind, far exceeding all the boasted skill of the workmen of Europe.

Mr. Colton, of "The Boston Journal," the first week he landed in Asia, found that his chronometer was out of order, from the steel of the works having become rusted. "The London Medical and Surgical Journal" advises surgeons not to venture to carry any lancets to Calcutta,—to have them gilded, because English steel could not bear the atmosphere of India. Yet the Damascus blades of the Crusades were not gilded, and they are as perfect as they were eight centuries ago. There was one at the London Exhibition, the point of which could be made to touch the hilt, and which could be put into a scabbard like a corkscrew, and bent every way without breaking, like an American politician. Now, the wonder of this is, that perfect steel is a marvel of science. If a London chronometer maker wants the best steel to use in his chronometer, he does not send to Sheffield, the centre of all science, but to the Punjaub, the empire of the seven rivers, where there is no science at all. The first needle ever made in England was made in the time of Henry the Eighth, and made by a negro; and when he died, the art died with him. Some of the first travellers in Africa stated that they found a tribe in the interior who gave them better razors than they had; the irrepressible negro coming up in

science as in politics. The best steel is the greatest triumph of metallurgy, and metallurgy is the glory of chemistry.

The poets have celebrated the perfection of the Oriental steel; and it is recognized as the finest by Moore, Byron, Scott, Southey, and many others. I have even heard a young advocate of the lost arts find an argument in Byron's "Sennacherib," from the fact that the mail of the warriors in that one short night had rusted before the trembling Jews stole out in the morning to behold the terrible work of the Lord. Scott, in his "Tales of the Crusaders,"—for Sir Walter was curious in his love of the lost arts,—describes a meeting between Richard Cœur de Lion and Saladin. Saladin asks Richard to show him the wonderful strength for which he is famous, and the Norman monarch responds by severing a bar of iron which lies on the floor of his tent. Saladin says, "I cannot do that;" but he takes an eider-down pillow from the sofa, and, drawing his keen blade across it, it falls in two pieces. Richard says, "This is the black art; it is magic; it is the devil: you cannot cut that which has no resistance;" and Saladin, to show him that such is not the case, takes a scarf from his shoulders, which is so light that it almost floats in the air, and, tossing it up, severs it before it can descend. George Thompson told me he saw a man in Calcutta throw a handful of floss-silk into the air, and a Hindoo sever it into pieces with his sabre. We can produce nothing like this.

Taking their employment of the mechanical forces, and their movement of large masses from the earth, we know that the Egyptians had the five, seven, or three mechanical powers; but we cannot account for the multiplication and increase necessary to perform the wonders they accomplished.

In Boston, lately, we have moved the Pelham Hotel, weighing fifty thousand tons, fourteen feet, and are very

proud of it; and since then we have moved a whole block of houses twenty-three feet, and I have no doubt we will write a book about it: but there is a book telling how Domenico Fontana of the sixteenth century set up the Egyptian obelisk at Rome on end, in the Papacy of Sixtus V. Wonderful! Yet the Egyptians quarried that stone, and carried it a hundred and fifty miles, and the Romans brought it seven hundred and fifty miles, and never said a word about it. Mr. Batterson, of Hartford, walking with Brunel, the architect of the Thames tunnel, in Egypt, asked him what he thought of the mechanical power of the Egyptians; and he said, "There is Pompey's Pillar: it is a hundred feet high, and the capital weighs two thousand pounds. It is something of a feat to hang two thousand pounds at that height in the air, and the few men that can do it would better discuss Egyptian mechanics."

Take canals. The Suez Canal absorbs half its receipts in cleaning out the sand which fills it continually, and it is not yet known whether it is a pecuniary success. The ancients built a canal at right angles to ours; because they knew it would not fill up if built in that direction, and they knew such an one as ours would. There were magnificent canals in the land of the Jews, with perfectly arranged gates and sluices. We have only just begun to understand ventilation properly for our houses; yet late experiments at the Pyramids in Egypt show that those Egyptian tombs were ventilated in the most perfect and scientific manner.

Again: cement is modern, for the ancients dressed and joined their stones so closely, that, in buildings thousands of years old, the thin blade of a penknife cannot be forced between them. The railroad dates back to Egypt. Arago has claimed that they had a knowledge of steam. A painting

has been discovered of a ship full of machinery, and a French engineer said that the arrangement of this machinery could only be accounted for by supposing the motive power to have been steam. Bramah acknowledges that he took the idea of his celebrated lock from an ancient Egyptian pattern. De Tocqueville says there was no social question that was not discussed to rags in Egypt.

"Well," say you, "Franklin invented the lightning-rod." I have no doubt he did; but years before his invention, and before muskets were invented, the old soldiers on guard on the towers used Franklin's invention to keep guard with; and if a spark passed between them and the spear-head, they ran and bore the warning of the state and condition of affairs. After that you will admit that Benjamin Franklin was not the only one that knew of the presence of electricity, and the advantages derived from its use. Solomon's Temple, you will find, was situated on an exposed point of the hill: the temple was so lofty that it was often in peril, and was guarded by a system exactly like that of Benjamin Franklin.

Well, I may tell you a little of ancient manufactures. The Duchess of Burgundy took a necklace from the neck of a mummy, and wore it to a ball given at the Tuileries; and everybody said they thought it was the newest thing there. A Hindoo princess came into court; and her father, seeing her, said, "Go home, you are not decently covered,—go home;" and she said, "Father, I have seven suits on;" but the suits were of muslin, so thin that the king could see through them. A Roman poet says, "The girl was in the poetic dress of the country." I fancy the French would be rather astonished at this. Four hundred and fifty years ago, the first spinning-machine was introduced into Europe. I have evidence to show that it made its appearance two thousand years before.

Well, I tell you this fact to show that perhaps we don't invent just everything. Why did I think to grope in the ashes for this? Because all Egypt knew the secret, which was not the knowledge of the professor, the king, and the priest. Their knowledge won an historic privilege which separated them from and brought down the masses; and this chain was broken when Cambyses came down from Persia, and by his genius and intellect opened the gates of knowledge, thundering across Egypt, drawing out civilization from royalty and priesthood.

Such was the system which was established in Egypt of old. It was four thousand years before humanity took that subject to a proper consideration; and, when this consideration was made, civilization changed her character. Learning no longer hid in a convent, or slumbered in the palace. No! she came out, joining hands with the people, ministering and dealing with them.

We have not an astrology in the stars, serving only the kings and priests: we have an astrology serving all those around us. We have not a chemistry hidden in underground cells, striving for wealth, striving to change everything into gold. No: we have a chemistry laboring with the farmer, and digging gold out of the earth with the miner. Ah! this is the nineteenth century; and, of the hundreds of things we know, I can show you ninety-nine of them which have been anticipated. It is the liberty of intellect, and a diffusion of knowledge, that has caused this anticipation.

When Gibbon finished his history of Rome, he said, "The hand will never go back upon the dial of time, when everything was hidden in fear in the dark ages." He made that boast as he stood at night in the ruins of the Corsani Palace, looking out upon the places where the monks were chanting.

That vision disappeared, and there arose in its stead the Temple of Jupiter. Could he look back upon the past, he would see nations that went up in their strength, and down to graves with fire in one hand, and iron in the other hand, before Rome was peopled, which, in their strength, were crushed in subduing civilization. But it is a very different principle that governs this land; it is one which should govern every land; it is one which this nation needs to practise this day. It is the human property: it is the divine will that any man has the right to know anything which he knows will be serviceable to himself and to his fellow man, and that will make art immortal if God means that it shall last.

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#### THE MURDER OF LOVEJOY

[At the great meeting held in Faneuil Hall, December 8, 1837, to denounce the murder of Lovejoy by the mob at Alton, Illinois, while defending his printing-press, after addresses by Dr. Channing and George S. Hillard, Hon. James T. Austin, attorney-general of the Commonwealth, rose, and in a speech of great bitterness compared the slaves to a menagerie of wild beasts and the rioters at Alton to the "orderly mob" which threw the tea overboard in 1773, and declared that Lovejoy was presumptuous, and "died as the fool dieth." The speech produced great excitement. Wendell Phillips, then a young man of twenty-six, who had not expected to take part in the meeting, was unable to keep silent, and rose to reply, while that portion of the assembly which sympathized with the attorney-general became so boisterous that he had difficulty in gaining the audience. Mr. Phillips had spoken before this at a meeting of the Massachusetts Anti-Slavery Society in Lynn, March 28, 1837; but this speech in Faneuil Hall was the real beginning of his great public career.]

**M**R. CHAIRMAN,—We have met for the freest discussion of these resolutions, and the events which gave rise to them. I hope I shall be permitted to express my surprise at the sentiments of the last speaker,—surprise not only at such sentiments from such a man, but at the applause they have received within these walls. A com-

parison has been drawn between the events of the Revolution and the tragedy at Alton. We have heard it asserted here, in Faneuil Hall, that Great Britain had a right to tax the colonies; and we have heard the mob at Alton, the drunken murderers of Lovejoy, compared to those patriot fathers who threw the tea overboard! Fellow citizens, is this Faneuil Hall doctrine? The mob at Alton were met to wrest from a citizen his just rights,—met to resist the laws. We have been told that our fathers did the same; and the glorious mantle of Revolutionary precedent has been thrown over the mobs of our day. To make out their title to such defence the gentleman says that the British Parliament had a right to tax these colonies. It is manifest that, without this, his parallel falls to the ground; for Lovejoy had stationed himself within constitutional bulwarks. He was not only defending the freedom of the press, but he was under his own roof, in arms with the sanction of the civil authority. The men who assailed him went against and over the laws. The mob, as the gentleman terms it,—mob, forsooth! certainly we sons of the tea-spillers are a marvellously patient generation! — the "orderly mob" which assembled in the Old South to destroy the tea were met to resist, not the laws, but illegal exactions! Shame on the American who calls the tea tax and Stamp Act laws! Our fathers resisted, not the King's prerogative, but the King's usurpation. To find any other account, you must read our Revolutionary history upside down. Our State archives are loaded with arguments of John Adams to prove the taxes laid by the British Parliament unconstitutional,—beyond its power. It was not till this was made out that the men of New England rushed to arms. The arguments of the Council Chamber and the House of Representatives preceded and sanctioned the contest. To draw the conduct of our ancestors

into a precedent for mobs, for a right to resist laws we ourselves have enacted, is an insult to their memory. The difference between the excitements of those days and our own, which the gentleman in kindness to the latter has overlooked, is simply this: the men of that day went for the right, as secured by the laws. They were the people rising to sustain the laws and constitution of the province. The rioters of our day go for their own wills, right or wrong. Sir, when I heard the gentleman lay down principles which place the murderers of Alton side by side with Otis and Hancock, with Quincy and Adams, I thought those pictured lips [pointing to the portraits in the Hall] would have broken into voice to rebuke the recreant American,— the slanderer of the dead. The gentleman said that he should sink into insignificance if he dared not gainsay the principles of these resolutions. Sir, for the sentiments he has uttered, on soil consecrated by the prayers of Puritans and the blood of patriots, the earth should have yawned and swallowed him up.

[Applause and hisses, with cries of "Take that back." The uproar became so great that for a long time no one could be heard. At length the Hon. William Sturgis came to Mr. Phillips's side at the front of the platform. He was met with cries of "Phillips or nobody," "Make him take back 'recreant.'" "He sha'n't go on till he takes it back." When it was understood that Mr. Sturgis meant to sustain, not to interrupt, Mr. Phillips, he was listened to, and said: "I did not come here to take any part in this discussion, nor do I intend to; but I do entreat you, fellow citizens, by everything you hold sacred,— I conjure you by every association connected with this Hall, consecrated by our fathers to freedom of discussion,— that you listen to every man who addresses you in a decorous manner." Mr. Phillips resumed.]

Fellow citizens, I cannot take back my words. Surely, the attorney-general, so long and well known here, needs not the

aid of your hisses against one so young as I am,— my voice never before heard within these walls!

Another ground has been taken to excuse the mob, and throw doubt and discredit on the conduct of Lovejoy and his associates. Allusion has been made to what lawyers understand very well,— the "conflict of laws." We are told that nothing but the Mississippi River rolls between St. Louis and Alton; and the conflict of laws somehow or other gives the citizens of the former a right to find fault with the defender of the press for publishing his opinions so near their limits. Will the gentleman venture that argument before lawyers? How the laws of the two States could be said to come into conflict in such circumstances I question whether any lawyer in this audience can explain or understand. No matter whether the line that divides one sovereign State from another be an imaginary one or ocean-wide, the moment you cross it, the State you leave is blotted out of existence, so far as you are concerned. The Czar might as well claim to control the deliberations of Faneuil Hall, as the laws of Missouri demand reverence, or the shadow of obedience, from an inhabitant of Illinois.

I must find some fault with the statement which has been made of the events at Alton. It has been asked why Lovejoy and his friends did not appeal to the executive,— trust their defence to the police of the city. It has been hinted that, from hasty and ill-judged excitement, the men within the building provoked a quarrel, and that he fell in the course of it, one mob resisting another. Recollect, sir, that they did act with the approbation and sanction of the mayor. In strict truth there was no executive to appeal to for protection. The mayor acknowledged that he could not protect them. They asked him if it was lawful for them to defend them-