

Scientific American.

NEW-YORK, MARCH 22, 1856.

Science and Revelation.

The history of our globe, as given by geologists generally, from their interpretation of the remains of animals and vegetables found in the earth's crust, has excited much controversy among men of science—divines and scholars—during the past half century; and the controversy is still carried on with no small amount of vehemence. The main subject of discussion is the account of the Creation in the first chapter of the Bible. The general belief entertained from of old regarding the meaning of this chapter, is that the acts of distinct creations, described therein took place during *days* like those we now enjoy—of twenty-four hours duration; also, that the period of time which has elapsed since those grand events, amounts to about six thousand years. Soon after geology commenced to be studied as a science, this interpretation of the acts of Creation began to be disputed, by geologists asserting that the rocks presented evidence of the far greater antiquity of the earth, and that the *days* of Creation mentioned in Genesis meant great epochs of time—perhaps millions of years. Fifty years since Dr. Chalmers, combatting the views of those who asserted that geology taught infidelity, said, "this is a false alarm; the writings of Moses do not fix the antiquity of the globe." Since then great has been the number of essays and books which have issued from the press, discussing the question *pro* and *con*. These are too numerous for us to mention; our present object is, principally, to notice two of the most recent, viz., the work of Taylor Lewis, Prof. of Greek in Union College, Schenectady, N. Y., and an elaborate Review of it in the last number of the *Bibliotheca Sacra*, by Prof. Dana, of Yale College.

Prof. Lewis, who is stated to be deeply learned in the Hebrew language, admits that the *days* mentioned in the first chapter of Genesis mean great epochs of time, but he casts aspersions on Geology, men of science, and science itself. We admit that certain theorizings of individuals, like the writings of Aristotle, may pass current for science; but it is "science falsely so called." Real science is simple truths or facts arranged or set in order; it is nothing more; Prof. Lewis does not clearly make this distinction, and Prof. Dana has answered him correctly and ably in defence of science.

We will now endeavor to present the substance of Prof. Dana's account of the history of Creation, because it is the latest, clearest, and best we have seen, and must be of interest to every son of Adam. He states that Geology proves our earth to have been at one time a fiery ball in space; then dry land and seas appeared, with a tropical climate over the whole globe. At a later period, mountains began to enlarge, the dry land to expand, a temperate climate to gather about the poles, and tribes of animals became more localized. Then, in the last age before man, the continents take their full breadth; rivers flow, everywhere valleys are formed; the zones of climate became nearly like our own, and every region of the globe has its peculiar fauna. "Finally, the features, and climates, and life, attain all their present variety, as man appears to take his place at the command of his Maker."

His ideas regarding the production of light are peculiar, and as we have seen the same views before, and now find them endorsed by Pro. Dana, we presume they are accepted as the most correct theory of light by all who have paid any attention to the subject. He says, "without mutual molecular action, there could be neither light nor heat. But let it be endowed with intense attraction of different degrees or conditions, and it would produce light as the first effect of mutual action begun. The command, 'Let light be,' was the summons to activity in matter." The plain meaning of this is, that the matter composing the earth was in existence before the law of gravity, and that when

it (matter) was endowed with gravity, the mutual action resulting therefrom produced light; in other words, light is an effect of the law of gravitation.

The records of the rocks, Prof. Dana asserts, declare that the creations of the animal kingdoms came not forth all at once, but in long progression. There was an age when shell-fish, such as cuttle-fish, corals, and trilobites, were dominant. The earth was then too warm, and the atmosphere too impure for more exalted forms. "This was the Silurian age of geological science." The next age was when fishes filled the seas, which is the Devonian of Geology. Then followed another, when reptiles, frogs, and salamanders commenced. Land plants then came forth, and were of exuberant growth, to abstract carbonic gas from the atmosphere and purify the air. The vegetable products of that age are now found in our coal fields. After this came the "Reptilian age," when there were reptiles larger than whales in the water; leviathan reptiles on land, and flying reptiles in the air.

In each of these ages there were distinct creations succeeding to exterminations of previously existing life. "Through the Silurian, Devonian, Carboniferous, and Reptilian ages, in America—fifteen times at least the seas were swept of their species, and in the succeeding epoch not a species of the former occurs." All this occurred during the *fifth* day of Genesis, according to geologists, which may have occupied a period of more than a million of our years.

The next epoch, the *sixth* day, was the advent of man, and the more perfect mammals, and Prof. Dana asserts with other geologists, that "the whole plan of creation had evident reference to Man, as the end and crown of the animal kingdom," and science has no evidence that any living species have been created since his appearance on this globe.

There is no dispute whatever in regard to the order of creation; geologists assert that the orders of creation described in Genesis, exactly accord with geological science, and the records of the rocks and Scripture are in perfect harmony. The only subject of dispute, then, is in reference to the question of *time*; there is not, and cannot be, any conflict between "Science and Revelation."

Gold and its Uses.—No. 3.

EXTRACTING GOLD.—The question of greatest importance, and the only one to which most special attention should be directed at present, is the extracting of gold from quartz in the most expeditious and cheapest manner possible. This embraces no less than three processes: the crushing of the quartz, the extracting of the gold from it, and then the separation of the gold from its amalgam.

The best machine for crushing quartz (some assert) is the old fashioned stamping mill, having its metal stampers so made that they can be turned to act on four sides, one after another, as they wear out. Then there is the old Chilean mill, composed of heavy rollers passing over the quartz; there is also the ball quartz crusher, and various other machines, the majority of which worth noticing have been illustrated in the columns of the SCIENTIFIC AMERICAN. There is also another class of machines, those designed to embrace crushing, washing, and amalgamating, at one continuous operation, such as the machine illustrated last week on page 209.

One principle of operation positively necessary in recovering the gold from quartz is to grind the quartz to fine powder, and to use friction and water to bring all the gold in the ground quartz into contact with the mercury. No subject has been more voluminously discussed, during the past three years, than this one—"the best method of extracting gold." Week after week the London *Mining Journal* has contained letters from various correspondents, each giving his own experience, and insisting on the correctness of his own opinions. Experienced miners from California and Australia have long battled against one another, then "sheathed their swords for lack of argument." We had thought the controversy ended some time since, but in the most recent numbers of the *Mining Journal* we notice that it has broken out again. One correspondent asserts that the

old stampers are the best crushers; another that crushing rollers are the best. One asserts that gold can be recovered from quartz without mercury, by simply washing, while another asserts this to be impossible. One recommends the roasting of the quartz previous to grinding, while another condemns this as being a most expensive process. And what is very strange, these controversialists do not present the views of mere theorists, but those of men who have worked at the mines, and who have had experience in the extraction of gold from its native matrix. All this affords evidence that a perfect system for extracting gold from quartz has either yet to be discovered, or else, if there is one in existence, it is but imperfectly known. Our object is to direct attention to improvements—to lead men to think, experiment, and devise.

CALIFORNIA.—The *American Mining Magazine*, published in this city—a truly scientific work—states that there is gold enough in California to employ the labor of centuries, but it can no longer be obtained as formerly. The time has gone past in that country for making fortunes by the simple pickaxe, spade, and pan—by hand labor. Machinery and capital are now required for obtaining the royal metal. The character of California mining has entirely changed since 1850. Shafts have now to be sunk to an immense depth, tunnels run far into the mountains, extensive dams erected, and flumes carried from rock to rock, over deep valleys and extensive ravines. All this requires capital and combined labor. In Nevada County—an extensive field for quartz mining operations—there are sixteen quartz mills in successful operation; five are run by water, and the others by steam and horse power. There are about \$2,000,000 invested in this kind of mining, and the *Mining Magazine* says: "This amount will be doubled in a few years, for it is proved beyond dispute that quartz veins are not only remunerative but inexhaustible." There is, therefore, before our country now, fields for gold mining of boundless extent, and exhaustless produce; therefore the gold interests of the United States—which previous to 1848 were of but feeble importance—are the greatest in the world with perhaps but one exception, those of Australia. Those interests, therefore, now claim a large share of, and deserve still more public attention.

CHEMISTRY OF GOLD.—Gold is not easily acted on by acidulous agents, still there are two definite oxyds of it. When gold is fed into a vessel containing *aqua regia*—nitro muriatic acid—which contains free chlorine in the nascent state, it is dissolved, and a perchloride of gold formed, which is a red, deliquescent, crystalline compound, soluble in water, ether, and alcohol, and is decomposed by light and heat. When proto-chloride of tin is added to a solution of per-chloride of gold, a fine purple precipitate is formed, which is called the "purple of Cassius," and is used in porcelain painting, and for tinging glass a red color.

Gold dissolved in nitro muriatic acid can be precipitated by adding to it a solution of the proto-sulphate of iron. The gold subsides to the bottom of the vessel containing the solution, and forms a brown powder, which, after being washed in hot water, then digested in hot dilute muriatic acid, is again washed, and forms the pure gold employed in gilding china or porcelain ware. It is intimately commingled with honey and a little borax, as a vehicle, is painted on the ware with a pencil, burned in a kiln, then burnished afterwards. Great care is exercised in mixing this gold powder, so as not to press it too hard, as this readily brings it into its metallic state again. Gold dissolved in *aqua regia* can be reduced to a crystalline state by simply driving off the acid, by exposure to heat on a tile in an oven. This crystal gold can be reduced to a metallic state again by simple pressure, and it has thus been used for filling the cavities of decayed teeth. We have also seen a ring of good metallic gold made from crystal gold pressed into a fine mold.

Silver and copper are harder than gold; hence, mixed with these metals, it produces an alloy harder than itself. The gold employed in jewelry is much adulterated. The skilful

jeweler can give different shades of color to golden ornaments by exposing them to different chemical agents, which dissolve a portion of the copper and silver alloy, while they do not touch the gold. The following is a French jewelers' receipt for brightening gold jewelry: Take two ounces of saltpeter, one of common salt, and one of alum, and dissolve them in a pint of hot water. Ten ounces of jewelry boiled in this for twenty minutes will have obtained a bright and beautiful color, after which they are to be taken out and washed well in warm soft water, and dried. The surface of the gold will have a dull appearance, but it can be made lustrous by burnishing.

A solution of gold in ether applied to the surface of fine polished steel instruments gilds them—the ether being driven off with heat. Fine articles of cutlery are thus gilt sometimes. The per-oxyd of gold will combine with ammonia and form a brown powder, terribly explosive when heated to 290°, touched with an electric spark or rubbed by friction.

Voice of the New York Senate.

We are happy to announce that the resolution lately brought before the Senate of the New York Legislature, instructing Senators and Representatives in Congress to use their votes and influence against the extension of the Woodworth patent, has passed by a triumphant majority. Indeed the whole Senate voted in favor of the resolutions except a few members who either went in the negative or did not desire to put their names on record. The resolve was carried by 24 ayes; nays only 4. This sweeping majority is a correct indication of the popular feeling upon the subject; it is only occasionally that opportunity occurs for a favorable expression of the public will in these matters. We believe that the above emphatic result will have great effect at Washington.

The resolutions alluded to were introduced by the Hon. Erasmus Brooks, Senator from New York City. In a speech of great ability he portrayed the magnitude of the privileges enjoyed by the Great Monopoly, and the injustice of allowing it to continue longer. For his earnest and successful labors in this cause he is entitled to the lasting gratitude of the public.

The career of Senator Brooks as a Legislator, although not yet very extended, is a noble one. In every movement that affects the interests and prosperity of the people he is sure to be found upon the right side. He is an earnest and efficient worker—an honest and rising man.

Recent American Patents.

Method of Straining Saws.—By T. Sharp, of North Greenbush, N. Y.—Consists in placing a strong elliptical, upright spring behind the saw; the spring is pivoted in the center; each end of the saw is connected, by means of a stout cord, with one of the ends of the springs; the cords pass over friction rollers; the elasticity of the spring keeps the saw constantly strained, and at the same time permits the requisite up-and-down movements. This is a cheap method of straining mulley saws.

Machine for Cutting out Boot and Shoe Soles.—By William Wells and Mellen Bray, of Turner, Me.—Consists of a peculiar arrangement of knives, whereby the soles are cut out into the exact form, the edges beveled or skived, and the groove or rand formed on the under side for the stitches. The three operations are all done simultaneously, with great rapidity and exactitude.

Bench Hook for Carpenters.—By Clinton W. Clapp, of Wappinger's Falls, N. Y.—This invention consists in the employment of a sliding jaw attached to a shank formed of two parts, said parts being connected in a peculiar way, and having beveled ends, so that they may be operated like a wedge and secure the sliding jaw at the desired point, when said jaw grasps or is forced into the piece of work to be held.

Pen and Ink.—By A. F. and C. M. H. Warren, of Brooklyn, N. Y.—This is an improvement in Fountain Pens. The pen holder is made hollow, and serves as an inkstand. The lower extremity of the holder is tapped so as to permit the escape of the ink to the pen. One point of novelty consists in a peculiar arrangement of a piston within the handle, so

as to assist in regulating the flow of ink. Pens of this description are very convenient.

Improved Parallel Ruler.—By R. Eickemeyer, of Yonkers, N. Y.—This invention consists in a ruler with certain novel appliances whereby it can be moved to rule parallel lines at equal or otherwise graduated distances from each other, with the utmost convenience and accuracy. Diagrams would be required to show its construction.

Improvement in Lime Kilns.—By Job Sands, of Sand's Mills, N. Y.—The inventor says that in the ordinary kilns the air for supplying draught to the fire is admitted below the grates, which causes the heat to ascend and strike the arch of the fire-place, whereby a portion of the heat is absorbed, and another portion lost by reflection. The improvement consists in arranging the air draught on a line with the top of the fire, so that all the heat will be carried directly into the boiler. This plan is said to effect a considerable economy.

Recent Foreign Inventions.

Dyeing Fast Black on Woolen Goods.—On page 158 we presented an account of a new method of dyeing woolen cloth black by a mordant of the bichromate of potash and a topical application of logwood and the sulphate of indigo. At the time of publication, we stated that in all likelihood *cam wood* was employed with the logwood, although this was not mentioned in the magazine from which we obtained the information. In the last number of *Newton's London Journal*, received last week, a fuller account of this process is given, and it is stated that four pounds of *cam wood* are added to every 100 lbs. of logwood, thus confirming our opinions.

A new Product of Castor Oil.—A patent has been obtained by George F. Wilson and George Payne, of London, for an improvement in treating oils to obtain a new elastic product. Castor oil is placed in a still, and the temperature of it is raised to 600 or 650° Fah.—super-heated steam being used in heating. As the act of distillation goes on at this heat, it is found that when about one half of the contents of the still have passed over in the form of fat acids and glycerine, a few drops of a milky-white substance also comes over. The heat is then cut off, and the distillation stopped. On the interior of the still there is now found a peculiar spongy elastic matter, which has an offensive odor, which is removed by a current of low pressure steam and washing with a solution of the carbonate of soda. We understand that this elastic product possesses some of the qualities of india rubber.

Preserving Vegetable Substances.—F. J. Anger, of London, has taken out a patent for preserving potatoes and other like vegetable substances, by dipping them in a warm solution of diastase, or gum made from starch. Some of this gum is dissolved in wa'er which is heated up to about 140° Fah., and the vegetable substances are then introduced into it, and kept at that heat until imbued with the solution. The vegetables are then taken out and placed in drying rooms until they are completely dried. Potatoes, when so treated, are stated by the patentee not to be susceptible of decomposition, by the influence of the atmosphere.

Paper from Tan Bark.—J. and T. Horton, of London, have obtained a patent for manufacturing a paper, suitable for pasteboard, from spent tan bark.

Extracting Castor Oil.—H. A. H. Durant, of London, has obtained a patent for extracting a very clear oil from the castor beans. The outer skin is first removed by rollers previous to the crushing and heating of them. This simple improvement produces a clear and fine oil, which it is proposed to call "castrine," the outer cuticle being then applicable for manure and other purposes. By this process, the thicker portion, or stearine, which is now lost (by being mixed and left with the outer skin or cuticle) is obtained, and the oleaginous or thin portion of the oil is not colored and deteriorated. The oil thus obtained can be purified by jets of gas, acids, and heat, at about 150° to 160°.

Manufacturing Iron.—J. Berch, of Birmingham, Eng., has obtained a patent for an im-

provement in processes for manufacturing iron—the improvements relates to the furnaces. In arranging furnaces, he builds a refinery furnace at the back tuyere, and employs reducing and oxidizing tuyeres to smelt and refine at one operation, so as to dispense with the fuel now required for the common refinery fire. He runs the metal from the blast furnace at once into the refinery furnace, so as to melt and refine the metal at one continued heat.

Smoking Tobacco and Cigars.

A French chemist has recently been trying some experiments on the smoking of tobacco and cigars, to discover the reason why a cigar, when partially smoked, extinguished for a short time and ignited again, has such an unpleasant flavor in comparison, with what it had when first smoked. His intention also was to ascertain the quantity of nicotine absorbed by tobacco smokers. The apparatus used consisted of a stone jar, in which the tobacco was made to burn, connected with a series of bottles communicating by tubes. The bottles were either empty, or contained some water and water mixed with a little sulphuric acid. From a few experiments it was found that, in the smoke of tobacco extracted by inspiration, there is ten per cent. nicotine. Thus a man who smokes a cigar of the weight of seventy grains, receives in his mouth seven grains of nicotine, mixed with a little watery vapor, tar, empyreumatic oil, &c. Although a large portion of this nicotine is rejected, both by the smoke puffed from the mouth, and by the saliva, a portion of it is, nevertheless, taken up by the vessels of the buccal and laryngeal mucous membrane, circulated with the blood, and acts upon the brain. With those unaccustomed to the use of tobacco, the nicotine, when in contact with the latter organ, produces vertigo, nausea, headache and somnolence. From further investigation it was found that the drier the tobacco the less nicotine reaches the mouth. A very dry cigar while burning yields a very small amount of watery vapor, the smoke of it therefore cools rapidly in the cigar, while passing from the point of ignition to the mouth; hence it is that the first half of a cigar smokes more mildly than the second, in which a certain amount of watery vapor and nicotine, freed by the first half, are deposited. The same remark applies to smoking in pipes. Smoking through water, or with long tubes and small bowls, prevents in a great measure the nicotine from reaching the mouth and being absorbed.

The new Frigate Merrimac.

This steamer, which lately sailed from Boston on an experimental trip seaward, has returned, and her performances are said, in the papers, to have been "perfectly satisfactory." She is paraded as the most complete and effective steamer in the American navy, and has been ordered to Annapolis, Md., near Washington, so as to afford an opportunity for Members of Congress to examine and admire her wonderful qualities, and then vote a few millions more for another crop of similar boats.

We have been informed, in a private manner, for the correctness of which we will not vouch, that the machinery of the *Merrimac* proved, on the late trial, to be a miserable failure; that the highest speed obtained was nine miles per hour, and forty-five revolutions of the propeller per minute, while the average speed was only seven miles per hour. If this is so, she is a disgrace rather than a credit to the country, and the treasury has been robbed for her construction more than it ever ought to be again for such a purpose.

It is a singular fact that no public statement of the speed of the *Merrimac* has heretofore been given. What does it all mean?

Cotton Seed and its Uses.

A recent number of the *Railroad Record*, Cincinnati, contains an excellent article on the above subject. It states that cotton seed yields 30 per cent. of oil, and that the total product of oil that could be obtained from the seed raised in the United States would amount to 671,940,000 lbs.—the residue being oil-cake, amounting to 1,567,860,000 lbs. Edgar Conkling, of Cincinnati, has invented a process for

making soap from the seeds without expressing the oil from them.

Earthquakes.

Recent accounts from Japan describe a terrific earthquake which took place at Jeddo, the capital city of that island, on the 11th of November last, by which 100,000 houses were thrown down, and 30,000 of the inhabitants killed. As the houses in that city are very small and numerous, and as the inhabitants, no doubt, rushed out from them when the first shock was felt, this will account for the great number of buildings destroyed in proportion to the number of persons. Still, the destruction of 30,000 lives by one earthquake proves it to have been one of the most terrible that has ever taken place.

On the 15th of last month, at night, several severe shocks of an earthquake were felt in San Francisco. The vibrations of the earth lasted about thirty seconds, and waked every person in the city. Bedsteads placed on casters were rolled across the floors, doors were wrenched from their hinges, large iron safes were moved out of their places, walls of buildings were cracked, clocks stopped, and other damage done, but no lives were lost, although every house in the city was swayed to and fro. The shocks were felt throughout the most part of the State.

There are two theories respecting the cause of earthquakes. 1st. The igneous theory; which maintains that this earth was once a molten fiery ball, and that its interior is still a fiery mass, and is sometimes caused to generate waves, which produce oscillations on the earth's surface. 2d. The electric theory; which attributes the shocks to disturbed magnetic action in the crust of the globe—that the shocks are nothing more than powerful electric shocks.

As earthquakes are local, those who dispute the igneous theory assert that if the interior of the earth were a molten mass, and earthquakes were caused by waves of this fluid, then the oscillations would be felt equally strong on every part of the earth's crust.

Explosions of Boilers.

On Wednesday, last week, a boiler exploded in a small factory belonging to Erhardt Beck, in Alder st., Phila., by which a number of persons were killed, and the building shattered to pieces. The boiler was an upright one, and the head was blown out. The Coroner's investigation established the fact that the explosion was caused by over-pressure of steam. It was a poor boiler, and was purchased second-hand two years ago, from another person who also had purchased it second-hand.

The following is the verdict of the jury:—"That Charles Eckhardt and Herman Eckhardt, came to their death by an explosion of a steam boiler in the manufactory of Erhardt Beck, Alder street, above Master, said explosion having been caused by gross neglect and carelessness, the said boiler being in an unsafe condition, and therefore the jury hold the said Erhardt Beck censurable."

There should be inspectors for boilers in every city, and no steam boiler should be allowed to be used without an Inspector's certificate. It is just as culpable to use such a boiler as the above in a factory, as to shoot a loaded cannon into a crowd.

Brittle Annealed Iron.

We have received another sample of brittle annealed iron from A. Hotchkiss, of Schnevus, Otsego Co. N. Y., which possesses the same characteristics as that described on page 184. The piece we then received was part of a plate; the piece we have now received is the fragment of a small tube. Where it was struck with a hammer it has broken off with an edge as clean as if it were cut with a chisel, and the appearance of it is like that of the cleavage plane of a crystal; the metal has evidently become peculiarly crystalline. It is easily operated upon with a file, but from its nature it is totally unfit for use in a machine.

Cast-Iron Connecting Links.

G. W. Hildreth, of Lockport, N. Y., suggests the use of cast-iron connecting links on railroad trains, as a substitute for the wrought-iron links in use. After mentioning some cases where connecting links broke when locomotives run off the track, thus saving the lives

of the passengers, he states that it would be well to make a certain provision for breaking the links when a locomotive or any of the cars run off the rails. He says, "the great difference between wrought and cast-iron links, is, the former will only bend by transverse strain, while the cast-iron will instantly break, and thus disconnect the cars. Should it be urged that cast-iron links will be subject to break readily by a sudden starting of the engine, the engineer will always get notice of this by means of the bell rope, which runs through the train, and a spare link can then easily be substituted."

The Missing Steamer Pacific.

At the time of going to press no intelligence of the steamship *Pacific* had been obtained. She left Liverpool on the 23d of January, and has, therefore, been out more than fifty days. The *City of Edinburgh*, a Scotch steamer, saw the cabin furniture belonging to some vessel on a field of ice, when on her last voyage to Europe; but there is no positive evidence that such furniture belonged to the *Pacific*. The current opinion respecting the fate of this steamer is, that she is lost. It is supposed that she came in collision with an iceberg during the night, while running at a high speed, making efforts to accomplish a short voyage, in competition with the *Persia*. This may, and may not have been the case. We have but faint hopes now of her safety; but we believe that some evidence of her fate will yet be gathered. But when we remember the fate of the *President* and the *City of Glasgow* steamships, not a relic of which has yet been found, so it may be the case with the *Pacific*, but we hope not.

Colored Flames.

Hydrogen gas burns with a blue flame; strontium with a red flame; copper oxyd with a green flame, and many substances with a yellow flame, such as the common gas used in our streets. The cause of this must be owing to the forms of the particles or atoms undergoing combustion. They must be of such forms as to reflect their peculiar colors, like a prism.

When boracic acid is present in minerals it is well known that they burn with a beautiful green flame; and Prof. Forbes, of Edinburgh, has recently discovered that chlorine produces the same result. A jet of chlorine directed upon the flame of a spirit lamp or coal gas, produces a jet of green flame. When burning alcohol is injected into a globe filled with chlorine gas the alcohol burns at the mouth of it with a flickering green flame. When hydrochloric acid is dropped cautiously on the flame of burning alcohol a greenish tinge is observable.

Hitherto a green colored flame has been considered by mineralogists and chemists as affording positive evidence of the presence of boron; but since it has been discovered that chlorine produces the same effect this test is valueless, especially when, as it often happens, chlorine and boron occur together.

Body Braces.

One of the London tailors has taken out a patent for a waistcoat which combines the two-fold convenience of being a waistcoat and a pair of braces at the same time. One of the English papers says: "It is a very happy thought, and very well rendered into a comfortable and most convenient garment."—[Exchange.]

Button eyelets may be sewed on the inside of a vest to answer the purpose of braces; but these should be made of some elastic substance. We, however, like the braces best. They are superior to any other means for upholding pantaloons, such as waist belts or back straps and buckles. Braces support the weight of the pantaloons from the shoulders, and is the most healthy method.

A Large Cargo of Cotton.

The ship *Morning Light* recently sailed from Mobile, Ala., with a cargo of 5869 bales of cotton, valued at \$251,217.

Natural Rights of Inventors.

We will publish, next week, an able article by the Commissioner of Patents on the above subject.