

Scientific American

NEW-YORK, JUNE 26, 1852.

Man and the Atmosphere.

One of the best arguments in favor of our earth being a special creation, opposed to the nebular hypothesis, or the nonsensical electrical matter theory, is derived from the atmosphere, that wonderful ocean of gas in which we live, and which we inhale at every breath. Viewing natural laws as the operations of matter (not the properties of it, which all high natural-law theorists blunderingly mix together), we cannot conceive how the moon could ever have been a part of this planet in a gaseous or fluid state, according to the nebular hypothesis. The moon has no atmosphere, no seas, no lakes, no rivers. Those men who talk of natural laws being eternal and universal, and of the whole of the planets, with their satellites, and the glorious sun, being at one time a huge mixed mass of gas, out of which they were resolved by gravity, have never profoundly reflected upon the simple question of "respiration." The same laws are not in existence throughout every part of the universe. There may be laws in active force in some of the planets unknown to our planet, and of which we cannot have the remotest conception. It must be so with respect to the solar orb; philosophers have written and talked much about the cause of solar light—how it is produced—but the subject is still shrouded in mystery. On the moon's surface no gentle dews distil their sweets, and no refreshing shower falls upon the lava rocks there; no flowers bloom, and no sweet sound nor perfume float upon the gale; there is no breeze for there is no atmosphere,—all is a lifeless dreary waste. Those who recognize moral laws as eternal principles—and none but the morally insane deny them—know that no moral law is in force in the moon, for moral principles are properties connected with intelligent and responsible beings. If our planet had no atmosphere, no living creature would be seen moving on its surface. The atmosphere must, from its very nature, have been specially created for man, and man especially created for the atmosphere. His muscles are solid pieces of the principal element of the atmosphere. It is composed of 79 parts nitrogen, and 21 oxygen, and this very composition is evidence of a special design. A tuff grown person takes 40 cubic inches of this atmosphere into his system every three seconds, and no person could exist for one minute if deprived of air, and if its composition were different it would be incapable of supporting life. Why this should be so, we cannot tell; we only know that such is the fact—one over which man has no control, to alter or amend, by any invention whatever. Man did not create this atmosphere for himself, nor did the atmosphere call itself into existence for him, and the natural law that could call them into existence, apart from the fiat of a great Intelligent Being, according to some theorists, must be one they have dreamed about, for such a law has never had an existence since time began on this earth. To produce the simple act of respiration—breathing—both the atmosphere and man must have been specially created with the properties and qualities which they possess. The oxygen performs the most active part in respiration; it is extracted from the nitrogen in the lungs, and combines with the carbon and hydrogen in the system, forming oxygenated compounds, such as carbonic acid gas, and the vapor of water; these products are expelled from the lungs. The oxygen acts as the supporter of low combustion, and the human body in life is like the "burning bush," burning but not consumed. Why, it might be asked, was man made to live on bread &c.? If his body be principally composed of water, and the principal element of the atmosphere, why is it that he has to toil for a food to keep up life, which merely goes into his system to be quickly expelled therefrom? Why is he made to require such food as demands unceasing toil to procure it, or the sacrifice of other lives to enjoy. Why was he not made so as to feed upon air or water for food? These questions are all vain; the nebular hypothesists, who endeavor to account for all things, may be able to give some

answer; ours is, "all things are done well," there is beauty over all this delectable world. It has been said that "nitrogen is a poison and oxygen is the vital air;" this is a great error: oxygen is just as much a poison as nitrogen,—our atmosphere proves this. Oxygen is no doubt the active agent of respiration, but it only serves its purpose as combined with 79 parts of nitrogen to do this. In life it is the fruitful agent for sustaining our bodies, but it is also the fruitful agent which at last brings down the strong man to the grave, and re-composes his frame into the clods of the valley, from which it originally sprung.

Who Rules the Country?

We boast of being the most free, happy, and best governed people in the world. The boast is no doubt true, but in making it, we should always take the exceptions into consideration. We are at least the most governed people in the world, if legislation is any criterion, for it is interminable. We have universal suffrage, and the charter of our liberties proclaims the doctrine—"rulers receive their just powers from the consent of the governed." But who make, and who are our rulers—the universal people? We do not think so. If all the men in these United States were asked, "what part did you take in electing the rulers of our Confederacy?" we are confident that eighty out of every hundred would say, "we voted to elect the nominees," the other fifth part of our voters could say, "we got them elected." The great mass of our people submit to be led; they are the most patient and accommodating people on the face of the earth. The city government of New York would perhaps not be tolerated in a single city in Britain; the abuse of power, the squandering of money, the enormous taxes, are without a parallel in any city in the world, yet our people bear it with great patience.

We have a Congress at Washington, but its members do not make all the laws; they speak and vote upon them, but some of them are made in New York and other places before Congress assembles, and the members have the privilege of voting for them and making them effective, just like the eight-tenths of our people who vote for political nominees at elections. We have what is called "The Third House" in Washington; this is a self-elected body composed of what are termed "lobby members," these men make quite a number of laws, to the great disgrace, sometimes, of the Senate. The lobby members belong to every class, each having its own peculiar interests to advance; they care not for their country nor liberty, their own benefit is the sole object of their outside legislation. It is thought, here, that with plenty of brass in their pockets and faces, they can accomplish almost any object. In our last number, on page 314, we noticed a Bill which had been introduced into the Senate by Mr. Dawson, for making the acts of the Chief Clerk of the "Patent Office" legal. We merely remarked that we did not see the use of this Bill, but since then we have learned that it is a most disgraceful one. The Senate passed it and sent it down to the House of Representatives, but on Monday, the 14th, the Senate, by a vote, recalled it, for it contained the odious provision of "making all the acts of the Chief Clerk of the Patent Office, and the Commissioner of Patents, valid and effectual at law." Had this Bill become a law, fraud, corruption, and every evil deed might be made valid and effectual at law, by the Chief Clerk and Commissioner of Patents. Why is such a Bill introduced at all; there is no necessity for it? Some of the Senators must know why it was introduced. There is surely something "under the rose" here. Senator Seward, it is said, knows all about it. The Committee on the Judiciary, through whose hands the Bill passed, was declared by Senator Geyer to be unacquainted with the Patent Laws. The majority of our Senators are also, or they would not have uttered such sentiments as are reported in the "Congressional Globe," in the debate on the Patent Laws. The Reporter for the Telegraph appears to have an understanding with the members of the "Third House," as a few lines is all that he has reported to the daily papers here, of one of the most important debates that has taken place during the present Session.

Fresnel's Light-house Reflectors.

History tells us that the grandest lighthouse ever erected was the celebrated colossal statue, which strode over the harbor of Rhodes. Ancient lighthouses, even among the maritime Phœnicians and Greeks, were merely fires made of wood, and kept burning upon tall cliffs, or else dim lamps kept burning in rude towers. It was easy, in past days to delude the weary mariners buffeting the storm and billow by the false bonfires of those land pirates, who, both in France, Spain, Ireland, and Britain, were, at one time, so numerous—whose profession was to illure, by false lights, the storm-stricken sailor to some destructive rock, then murder those who escaped the sea, for the plunder of the wrecked vessel. Those days have gone past, more by improvements in marine beacons than the humanity of the age or the vigilance of governments, but it is not long since those improvements were made. In modern times, England has, for a long period, been the most eminent marine nation, consequently, as her coast is very dangerous, great attention has been paid to the construction of good lighthouses. The three most wonderful sea structures of light-houses in existence belong to her; they are the well known Eddystone Lighthouse, built by that famous engineer Smeaton, the Bell Rock Lighthouse, and the Skerrevore Lighthouse. The Eddystone Lighthouse was completed by Smeaton, in 1759. It is 68 feet high, and the base 26 feet in diameter being barely less than the surface of the rock on which it stands. It is built of stone; the stones are dovetailed together, and "joggled," as it is termed, so as to prevent the courses of stones from sliding on each other. It is situated in the midst of the sea, nine or ten miles distant from Plymouth. Tallow candles were burned in this lighthouse for forty years after it was finished. Then came lamps with twisted-cotton wicks, and then common argand lamps; all these, however, are now superseded by argand lamps and reflectors, one argand lamp with lenses and reflectors, and one argand lamp with lenses and reflecting prisms.

So satisfactory had been the result of the metal reflectors, in lighthouses, that there seemed little room for improvement, until Fresnel devised the application of lenses, and also reflecting prisms in combination with lenses, to a single large lamp. There are great practical difficulties in fabricating a large glass lens. Condorcet and Brewster suggested, and Fresnel effected the construction of a lens of separate prisms, all unnecessary glass being removed. The great improvement made by him was the substitution of reflecting prisms for mirrors, thus introducing the principle of lighting by one argand lamp lenses and reflecting prisms. When light is falling on the second surface of a prism, it may fall so obliquely that the surface cannot refract it, this incident light is, therefore, totally reflected from the second surface. "If a ray," says Professor Cooper, "enter the glass prism so as to make the angle of incidence greater than 41° 49', it is totally reflected." Fresnel tried the illuminating powers of this light, in 1843, against those of mirrors, and found it to be as 140 is to 87. The first light of this kind, on a large scale, put up in a lighthouse, was by Stephenson. Fresnel is a Frenchman, but England, having always an eye to marine improvements, has adopted his mode of lighting more extensively than even France. It is not much to the credit of our go-aheaditive spirit that we are so far behind in our lighthouse system. We hope that what we have said may be the means of doing some good for our hardy sailors. We hope it will never again be said that expensive lighthouse apparatus was imported to this city, and lay in our Custom House, unheeded, until it was sold at auction for old metal, to some cunning fellows who knew what it was. This was done, and our government had no little trouble to get the apparatus back again; the case is still at law.

Burnet's Patent Water Cooler.

The use of ice in hot weather is indispensable to health and comfort, when used prudently. Its employment is becoming more general in every family, rich and poor. We have often regretted the great waste of ice by the common means of using it; this has, we are happy to say, been remedied by coolers on

an excellent principle. Burnet's Water Cooler, patented last year, and for sale by J. & C. Berrian, 601 Broadway, this city, is an excellent and at the same time handsome apparatus for economizing ice. The Cooler is made like a hollow cylinder, with a jacket, having its division filled with some good non-conducting material. The ice is placed inside with the water, and as the atmosphere does not come in contact with it and the water, none of the cold is absorbed by the hot air on the outside. This is the way by which the ice is saved. There is a pan for keeping fruit under the cover, and it is very convenient for offices, stores, workshops, and private dwellings. Two pounds of ice to the gallon of water will keep it at 40°—only 10° above the freezing point—all day. We have one of them in our office, and consider it to be a great improvement over the earthen jars which, at one time, were so much in vogue.

Preservation of Meats.

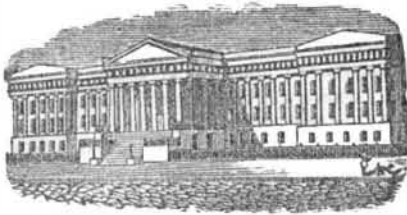
In Houndsditch, London, there is a large establishment for making "preserved meats." Meat and vegetables are put up in canisters, which keep for many years if the operation be performed in a proper manner. All the heating is done by steam, and by a very peculiar process. The canisters, filled with the meats to be preserved, are put into a brown-looking mixture, which looks like chocolate. No fire is visible, but the vessels containing this liquid are ramified with steam pipe. This liquid is the chloride of calcium; it will not boil under a temperature of 320°; there is a most important object in using it instead of water, which boils at 212°. A great heat is obtained without steam, and this is just what is wanted. The canisters containing the provision, before being placed in the bath of the chloride of calcium or lime, are closed permanently down, with the exception of a small hole in each, not much larger than the prick of a shoemaker's awl in the cover. The cook stands watching, with a cold sponge and a soldering tool. Whenever he sees steam issuing in a small jet from the hole in any canister, he knows the enclosed air is driven out of the canister, and whenever he is satisfied the viands are perfectly done, he squeezes from the sponge a drop of water in the hole, the steam is at once condensed, and then he drops a plug of molten solder in the opening, and thus hermetically seals the canister. All the canisters are treated in this manner. Meat put up in this way has been known to keep good for years, but if, by any accident, the air gets inside, it putrefies in a short time. It is the air which causes decomposition in all animal substances: it is the grand agent of both life and death. One sign of putrefaction, in such canisters, is their bulging outwards; those which are fresh have a concave surface. This mode of preserving meat and vegetables is a very excellent one, indeed, if proper care be taken in the selection of good meat, and the careful expulsion and exclusion of air. One defect of the system is, every canister purchased by a stranger must be by faith, for there is no way of finding out what the quality of the viands is. In this respect it is inferior to the patent "Meat Biscuit" of Gail Borden, Jr.

The Use and Application of Chloroform.

The medical journals have been discussing the chloroform question again. A few deaths by its use has excited much attention, and some have come to the conclusion that it should not be used to render people insensible during severe surgical operations. The hydropathists have thus expressed themselves. We believe that there is no danger in the use of chloroform, if applied with discretion. The deaths which have resulted from its application have been very few, considering the extensive use which is made of it. Its uniform success and safety rendered those incautious under whose superintendence the deaths were produced. In every case the quantity employed should be weighed or measured, but it is often given without the least attention being paid to the exact quantity employed.

Candidates for the Presidency.

Gen. Scott received the Whig nomination for President on last Monday, at Baltimore; no less than than 53 ballotings were cast. The two candidates are—Gen. Scott, Whig; Gen. Pierce, Democrat.



Reported Officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office
FOR THE WEEK ENDING JUNE 15, 1852.

FASTENINGS FOR GARMENTS—By E. B. Belknap, of Spring Garden, Pa.: I claim the combination of the catch-plate with the plates above and below it, as described.

I claim the perforated bar for preventing the instrument from turning, the whole being arranged and acting substantially as set forth.

VALVES OR GATES FOR OBLIQUE FLOAT PADDLE WHEELS—By J. C. Carnross, of Philadelphia, Pa.: I claim the series of radial winged and pivoted gates for preventing the water, acted on by the paddles, being moved laterally as they move through the water, and opening to deliver the water freely at the proper time, arranged and operating substantially as described.

MILL FOR CRUSHING QUARTZ—By J. W. Cochran, of New York City: I claim giving motion to the balls between the two plates or discs, in the manner and for the purpose specified.

PIANOFORTES—By Wm. Compton, of New York City: I claim making the perforated bridge for the upbearing of the strings, a part of the solid arched frame or plate, as described.

GRANULAR FUEL FROM BRUSHWOOD AND TWIGS—By Reuben Daniels, of Woodstock, Vt.: I claim the granular fuel produced from brushwood and twigs by cutting the same into lengths about equal to its average diameter, as described, as a new manufacture.

[Would Mr. Daniels consider any person infringing his patent, who took his axe and cut twigs and brushwood any length he chose, and used them for fuel? We believe this would not be an infringement.]

CAST-IRON CAR WHEELS—By Peter Dorsch, of Schenectady, N. Y.: I claim the double reversed corrugations connecting the rim and hub, forming and acting as described, and the combinations of these corrugated parts with the annular cylinder between them and the hub, as described.

MACHINES FOR MAKING CIGARS—By Wm. Dawson, of Huntington, Ct.: I claim the manner described of making cigars, viz., by combining with the cutters and followers which cut off and feed in the requisite quantity of tobacco for each cigar, the rollers for rolling up the fillers, and putting on the wrappers, said rollers having the requisite arrangement of parts, so as to open to receive the material, and close to form the cigar, and again open to deliver the finished article, in the manner substantially as described.

I also claim the making of the roller which feeds in the wrapper, of less diameter than the rollers which form the filler, so that the filler may move at an increased velocity over that of the wrapper, for the purpose of more evenly spreading out the wrapper, and winding it more tightly upon said fillers, substantially as described.

POLISHING DAGUERRETYPE PLATES—By Townsend Duryea, of Williamsburgh, N. Y.: I claim the horizontal reciprocating bed, operated in the manner described, or in any other equivalent way, in combination with the frame, for the purpose specified.

ALARM LOCKS—By Chas. Fleischel, of New York City: I claim the combination of the slide and button, constructed for the purpose of making and breaking the connection of the bell and hammer with the bolt catch, latch, or fastening of the lock, substantially as described.

I also claim the combination of the lever with the bolt and catch or latch of the lock, by means of which the movement of the catch is prevented, when the bolt is projected, and the catch is drawn by the same key which has drawn the bolt, constructed and operated substantially as described.

PREPARING COTTON YARN FOR THE MANUFACTURE OF DUCK AND OTHER COARSE FABRICS—By H. N. Gambrell, of Baltimore, Md.: I claim the process described of preparing yarns for coarse cotton goods, but more particularly for cotton duck, by passing them through, between moistening rollers, or otherwise wetting them, and then passing them over or around grooved or plain heated steam pipes or rollers, for removing their elasticity, smoothing and condensing them, whilst in a state of proper tension, substantially as described.

ORGANS—By Albert and George Gemunder of Springfield, Mass.: We claim the use of a separate air chamber for supplying wind to all the pipes of a single stop, as described, and as opposed to the old method of having a single air chamber supply all pipes of the same note or letter in the different stops.

And finally, we claim the combination of air chambers such as are described, with valves communicating with the several pipes, and operated by mechanical agencies, such as are shown, substantially as described.

CARRIAGE AXLES—By Kingston Goddard, of Philadelphia, Pa.: I claim making the box in two or more parts, with a recess to embrace a collar on the journal part of the axle, or the equivalent thereof, substantially as described, when this is combined with the mode of securing together the section of the said box, by fitting it within the hub or pipe box, and securing it therein by a nut which embraces the several sections, and which secures them within the hub or pipe box, substantially as specified.

MOTION OF THE LAY IN LOOMS—By John Goulding, of Worcester, Mass.: I claim giving the lay of a loom one or more long beats for the shuttle to pass or to insert a wire into the web, and as many short beats as may be necessary or desirable to strike up each thread of weft and wire, with a toggle joint operated by a sweep or some other device connected to or operated by a crank cam or otherwise.

DERRICKS—By Selah Hill, of Jersey City, N. J., & C. H. Dupuy, Jr., of Rondout, N. Y.: We claim placing the axis, upon which the jib swings, in a position deviating from the vertical, so as to cause the jib to have a tendency to swing in one direction, and applying the hoisting tackle, or part of the hoisting tackle, in any manner substantially as described, to

the side opposite to the direction in which the jib tends to swing, so as to make the hauling on the said tackle, or part of the tackle, swing the jib in the opposite direction to that in which is its tendency to swing when left free.

PREPARATIONS OF ARCHIL—By Leon Jarosson, of New York City: I claim mixing and treating lichen rocellus with a volatile alkali, urine, and clear and fully saturated lime water, in the proportions and after the manner set forth, for the purpose of producing a coloring matter known as archil.

[The lime is all that is new in this; soda lye is better.—Ed.]

JOINTING STAVES—By Edwin Jenney, of Middleborough, Mass., & David Rodd, of Boston, Mass. (assignors to Edwin Jenney, of Middleborough, Mass.): We claim, in combination with each carriage or frame, the clamping contrivance or mechanism by which such carriage is held firmly in position, after being moved outwards by a stave, and while such stave is being reduced on its edges, or has the bilge formed on it, such contrivance or mechanism consisting of the movable bar, the rocker bar, the lever, connecting rod, and the clamping lever, the whole applied to each carriage and made to act on it, as specified.

And in combination with the lever, as applied and operated in the manner above set forth, we claim the mechanism by which the fulcrum of the lever is caused to move longitudinally or towards the cam for the purpose of producing the effect, equivalent to shortening the rear arm of the lever, and lengthening the front arm thereof, whereby the cutter head is made to depart further from the middle of the machine, so as to increase the curve of the bilge, or make it, as it were, with a diminished radius, such mechanism being the stationary slotted plate underneath the carriage or frame, as arranged and made to operate essentially as described.

And in combination with the cutter, which produce the bilge curve, we claim the self-adapting planes or plane irons, arranged in front of such cutters, and for the purpose of jointing or smoothing the edges of the bilge, as explained.

SADDLES—By Wm. S. Kennedy, of Philadelphia, Pa.: I claim the employment of woven rattan, cane, whalebone or other similar elastic substance, in the construction of the seat of riding saddles, said seats, so constructed, being attached to and combined with the saddle tree, in the manner and for the purpose set forth.

WIRING BLIND RODS—By F. H. Moore, of Ithaca, N. Y.: I claim, first, the combining of clenching mechanism substantially as described, with devices for feeding the rod and the wire, piercing the former, and severing, forming, and inserting the latter, whereby I make and firmly attached blind staples in their proper positions, substantially as described.

Second, I also claim the pivoted clencher, arranged and actuated substantially as described.

HANGING MILL SPINDLES—By Wm. H. Naracon, of Auburn, N. Y.: I claim the combination of the bail or balance rim (of the usual shape) with the cock eye of the spindle, by means of the inverted bearing cup, whose shaft presses up through, and is made fast in the centre of the said bail, and whose head is enclosed in the inverted socket, which rises above and is mate fast to the top of the spindle, substantially as set forth.

BEDSTAD FASTENINGS—By A. S. Newhouse, of Richmond Co., Ga.: I claim securing the rail to the post, by means of a pin, key, and plate, in the manner substantially as set forth.

MEAT CUTTERS—By Jos. Potts, of Yocumtown, Pa.: I claim the mode of attaching the knives described, by which they can be taken out and replaced expeditiously.

ORE STAMPERS—By Thos. Reaney, of Philadelphia, Pa.: I claim the employment of weights upon the stamper, substantially as described, to keep up a uniformity of weight as the stamper wears, as set forth.

HAND SEED PLANTERS—By Gelston Sanford, of Ellenville, N. Y.: I claim the method of conveying seed from the seed box, and depositing it in the furrow or hill, substantially as described, viz.: by having the rods attached in any proper manner to a staff said staff and rods passing vertically through the bottom of the said box, the upper part of the rods having cups attached to them by elastic joints, the cups having spurs projecting from them, which can or turn over the cups, when the staff and rods are raised, and throw the seed into the tops of the tubes, when they catch under the projections, the lower ends of the rods forcing out the seed from the tubes when the staff is depressed, and the springs retaining it when the staff is raised.

HARVESTERS—By Wm. & Thos. Schnebly, of New York City: First, we claim the arrangement of the bridges beneath the platform, in combination with chain bands, having accommodating knee-formed fingers or rakes, working on pivots and attached thereto, substantially as described.

Second, we also claim working the vibrating cut'er between an under and an upper open guard or finger, as described.

LABEL CARDS—By James Sharp, of Roxbury, Mass.: I claim the manufacture of label cards or tickets of cloth and paper, stuck and pressed together, substantially as described.

MAKING CORDAGE—By David Perry, of Fredericksburgh, Va. (assignor to F. & J. W. Slaughter): I claim, first, the arrangement and combination of the parts by which the machine is enabled to stop itself when the sliver becomes exhausted, or nearly so, in any of the cans, viz., by means of the movable bottom within the cans connected to the rod, which passes through the tubular journals of the can frames, and descends below the disc, the arm fixed near the centre of the spring shaft, and the arm fixed near the projecting end of the said shaft, and the arm projecting from the side of the machine; or the respective equivalents of the said parts, when arranged combined, and operating with each other and with the fixed pulley, and the loose pulley on the shaft, substantially in the manner set forth.

Second, I also claim the corrugating of the sides of the cans, to prevent the sliver from rising therein, when it is pressed into the same, by which a much larger quantity of sliver can be placed in them than can be placed in cans of the usual form.

Third, in combination with the said corrugations in the sides of the cans, I also claim the perforating of the sides of the same, for the purpose of allowing the air to escape therefrom, when the sliver is compactly pressed into the cans.

Fourth, I also claim the inserting of a wing or wings into each of the cans, for the purpose of preventing the combined annular and rotary motion which is imparted to the cans from twisting and making the slivers, as they rise therein, to the upper tubular journals of the can frames, substantially as set forth.

SEWING MACHINES—By A. B. Wilson (assignor to N. Wheeler, A. B. Wilson, A. Warren & E. P. Woodruff), of Watertown, Conn.: I claim, first, the combination of the bobbin for carrying one thread, with

a rotating hook, which is of such form, or forms part of a disc, or its equivalent, as to extend the loop on the other thread, and pass it completely over the said bobbin, whereby the two threads are interlaced together, the parts being arranged and operating in any way substantially as set forth.

STAMPING ORRS—By Virgil Woodcock, of Swansey, N. H.: I claim the combination and arrangement of the said arc of cogs and its wheels, the two spur wheels the shafts thereof, the drums, straps, frames, their catch levers and disengaging cams, the whole being applied to the two weights or rams, and made to operate or alternately raise them, disengage them, allow them to fall, and afterwards re-engage them all, as specified.

And in combination with the two spur gears and the arc gear, I claim the cam on the wheel, the two spring catches, and the two pins or studs all arranged, applied and made to operate substantially as specified.

FRICTION CLUTCH—By Wendall Wright, of New York City: I claim operating the segments for producing friction on the inner surface of a loose pulley by means of a thimble on the shaft of the pulley connected with segments by diagonal rods or braces, substantially as described.

DETACHING HARNESS FROM HORSES—By George Yellott, of Bel Air, Md.: I claim the manner of constructing the harness, the saddle-tree guard, and stop, as described, so as to enable the driver, at any time, to detach the horse or horses from the harness and buggy, carriage, or other vehicle, by a single pull, or jerk of a cord.

Remarkable Voyage in the Air.

John Wise, of Lancaster, Pa., made his 13th aerial voyage from Portsmouth, Ohio, on the 3rd inst. His balloon voyage was a remarkable one, and the grandest he ever performed, so far as magnificent sights are concerned. He ascended a little after 4 o'clock in the afternoon, and soon rose to an elevation of 2,000 feet. While slowly sailing along at this elevation, by the range of a hill in Kentucky, three rifle shots were fired at him, one struck the car, but so very lightly that it did no harm. He believes the striking part was mere chance. Those who fired the shots, we have no doubt, did not imagine that there was a person in the balloon. Some exceedingly useful meteorological information was obtained by Mr. Wise in his voyage. These he states are as follows:—

1st. Thunder storms have two plates of clouds, the upper discharging the contents, whatever it may be, rain, hail or snow.

2d. Sheet lightning of an orange color undulates silently between the upper and lower cloud, in a waving motion.

3d. The discharges of electricity take place in the lower cloud, (by discharges are meant thunder and lightning.)

4th. The distance between the upper and lower cloud is not less than 2,000 feet, (this is mere eye measurement.)

5th. The uprising current was not continued higher than the lower cloud, and was rising and whirling as long as I was in the margin of the storm, being in it twenty-five minutes.

6th. The storm was much wider below than above, and the deposits diverging at least 25 deg. from a perpendicular line.

7th. The deposition of hail and rain was thickest in the centre of the storm. I could not, of course, look through it, but I viewed one from its front, the other from behind its line of direction, and they both appeared the same.

8th. Under the shadow of the upper cloud it is very cold, and in the lower cloud it is quite warm.

9th. The upper cloud was moved by the current which always blows from west to east.

10th. Other causes than the upper current may affect the horizontal course of thunder storms so as to increase or diminish their violence.

I might deduce some data from what was so distinctly observed on this occasion, but will for the present leave that to abler heads, and particularly to Prof. Epsy and the Smithsonian Institution.

Mr. Wise enjoyed the grand and terrific spectacle of looking down upon a war of the elements upon a scale of grandeur far surpassing Waterloo. We advise Prof. Epsy and Dr. Hare to make a number of aerial voyages to settle their disputes. We think it would be a grand plan for them; much better than writing and printing long papers on the subject. Let them get up into the regions above along with Mr. Wise, and make observations. This point might be very useful to the Smithsonian Institute in getting meteorological information.

Lightning plays strange freaks. On the 15th inst. the Congregational Church, in

Thompson, Conn., was struck and badly injured. The telegraphic wires, which pass within a rod or two of the church, seem to have had considerable influence upon the fluid. Two of the posts which sustain the wires were split, and the wires for some distance thrown to the ground. The lightning rod of the church, by some accident, had been thrown out of place.

Extension of a Patent.

On the petition of John Brown, of Stonington, Conn., praying for the extension of a patent granted to him for an improvement in gaffs of sailing vessels, for seven years from the expiration of said patent, which takes place on the 31st of Dec., 1852.

It is ordered that the said petition be heard at the Patent Office on Monday the 26th of July, 1852 at 12 o'clock m.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing, must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

THOS. EW BANK, Com. of Patents.

Washington, June 14, 1852.

Tunnelling the Hoosack.

A correspondent of the Springfield Republican, of the 14th inst, gives the following account of the state of operations at the projected Hoosack tunnel:—The boring machine is on the ground, but as yet hardly resolved into its component parts. A mass of cast iron spokes, cogs, wheels, shafts, belts, &c., &c., lay around us, out of which the workmen were slowly (for nearly every piece required a derrick and pulleys to get it into place) re-constructing the ponderous wonder. The carriage for operating the machine is in place, facing a perpendicular side of solid rock, just off the actual line of the road, which has been prepared for the first actual experiment. The immense shaft was being hoisted into position, and then would come the wheel and its accompaniments, and then the driving power, which consists of engines of one hundred horse power, and for which a building was being erected. There have been many delays in getting the machine upon the ground, and in place, and we are told it would probably be six weeks at least before everything would be ready for a start.

Machine for Turning Irregular Forms.

We understand that Thomas Blanchard, of Boston, has assigned his patent for turning spokes, lasts, gun stocks, and other irregular surfaces, to the Hon. James M. Quimby, Mayor of Newark, N. J., and proprietor of the celebrated coach manufactory of that place, for a good round consideration, and that the purchaser is so well pleased with his bargain, he has presented the lady of Mr. Blanchard one of his best family coaches. Several have written us of late respecting this machine, and the above will furnish information not in our possession heretofore.

American and British Ships—A Challenge.

The Boston Atlas states that two or three Boston ship-owners have sent a challenge to the ship owners of Great Britain, somewhat to the following effect:—The Boston parties will produce a ship, not less than 800 nor over 1,200 tons register, to compete with any vessel of the same capacity, now built, or which may hereafter be built in Great Britain; the winning party to receive £10,000, and the race to be a voyage to China. This will put the British shipwrights to their metal.

Nautical Enterprise.

Among the miracles of navigation, in these days, deserves to be mentioned that a schooner of 150 tons is to leave Port Stanley, on Lake Erie, for Australia direct, in August; she is to be fitted up in yacht style, and it is deemed that she is quite adequate to the voyage that she is to undertake. She will pass through the Welland Canal into the St. Lawrence, and out of the St. Lawrence into the Atlantic. Whether the Port Stanley people intend to run a regular line to Australia we are not informed.