

Scientific American

NEW YORK, NOVEMBER 16, 1850.

Commissioner of Patents' Report.

Last week we presented an outline of the Report of Chief Examiner Page; this week we present that of Chief Examiner Fitzgerald. He states that he examined 666 cases, "a larger number than was ever before examined by one Examiner in the same length of time." The number of patents passed by him was 270, the number rejected, 460. "Many applications," he says, "after one set of claims have been rejected, are amended and returned for a new examination, upon new or amended claims, requiring the same labor on the part of the examiner [not quite, we think] as new applications." He also states that 400 cases, owing to re-examinations for amended claims, amount to 460—a little more than 1-6th of the whole—that is, every 600 applications amount to 700 examinations. Much of this examination is the fault of the Patent Office: many patents now in existence have had their claims rejected, re-rejected and finally granted. We believe that the Patent Office Examiners might save a great deal of trouble to themselves. Mr. Fitzgerald states that he rejected three applications for every four he examined. He believes that multitudes of inventors will still bring forward old inventions, owing to want of information on subject.

But one appeal, it is stated, has been taken from Mr. Fitzgerald's desk since 1846: if reference, however, had been made to Mr. Trapp's invention for manufacturing barrels, the allusion would have been anything but pleasant. Mr. Fitzgerald has charge of five classes; 1st, mills for grinding, horse powers, regulators and mechanical movements generally. 2nd, carriages and implements of travel. 3rd, machinery for working lumber, such as planing machines and tools for working in wood. 4th, hydraulics and pneumatics, such as water-wheels, wind-mills and hydraulic engines. 5th, manufactured textile goods, and machinery for manufacturing fibrous textile fabrics, such as looms, carding and spinning machines, &c. Twenty-four patents were granted on mills, the principal one of which was for a strong artificial current of air driven in at the eye of the stone, in such a manner as to force the flour more rapidly through the mill than formerly. In reference to flour separators, the Report states, "Patents upon such machines are granted liberally, because slight changes in them, which would be of no importance in machinery generally, often produce marked results, and require contrivance instead of mere mechanical skill." This is a singular statement. Two good improvements for haaging mill shafts were patented; thirty-seven patents were granted on carriage contrivances, such as a tilting wagon, carriage axles, springs, and car couplings; eight of the patents were for improved wheels.

Thirty-four patents were for improvements on filters, windmills, water-wheels and blowers, and no less than six of them were for modes of raising and drawing water from wells. Eight patents were granted on pumps, some rotary and some reciprocating. But few patents were granted for water-wheels—it would seem that this field is almost entirely pre-occupied. Ten patents were granted on saw-mills; twelve patents on turning machinery, and twelve on boring and mortising machines. Several patents were granted for stave machines, and no less than twenty on planing machines.

No less than about 90 patents were granted on machinery for the manipulation of fibrous and textile manufactures: five of them were on cotton gins, and the Du Bois machine, illustrated on page 404, Vol. 4, Sci. Am., is particularly mentioned. Five patents were granted for sewing machines, one of which is illustrated in the first number of our last volume. No less than 30 patents were granted on looms for weaving, some of which appear to be very complicated, but no less ingenious and good on that account. This Report of

Examiner Fitzgerald is very interesting, and when we consider the multitude of patents granted for machines of a certain class like looms, the question arises, "can there be any other improvements added, are we not at the end of invention?"

The answer is an easy one: No. Invention begets invention, and oftentimes when we think, "can any improvement really be made upon this and that old class of machines?" the past rises up in the character of Hope pointing to glittering prizes yet to be awarded to future inventors.

Mr. Fitzgerald is a lawyer, and states that it is more difficult to become acquainted with science and art than with law. He is no doubt perfectly correct in this statement, but the influence of inventive and scientific men in the government is no more than a mite compared to a mountain, in comparison with that of the gentlemen belonging to the bar.

McCallum's Improved Railroad Bridge. Interesting Experiment.

On last Wednesday afternoon, the 6th inst., we witnessed at the Novelty Works, this city, a very interesting experiment, in testing the qualities of a new bridge invented by Mr. Daniel C. McCallum, of Owego, Superintendent of Bridges on the New York and Erie Railroad—the architect of the famous Cascade Bridge, on that road, and one of the best builders of bridges in our country. The experiment was conducted in the presence of some of the most practical scientific men in the country, such as Mr. Seymour, State Engineer, Mr. Horatio Allen, of the Novelty Works, and engineer on the unfinished part of the Erie Railroad; Mr. S. S. Post, engineer at Piermont, of the finished part of the Erie Railroad; Major Morrell, and a number of other distinguished gentlemen. The subject of experiment was a model 12 feet long, (10 feet long between the supports) made of three-quarter inch stuff, 21 inches deep at the centre, 12 inches deep at the abutments. The roadway was built about midway between the sides. It was levelled up with brick, to receive a superincumbent load of pig metal. This slender bridge was to be tested to its breaking point—in other words, loaded until it broke. The iron was weighed out, each bar balanced, and all laid in line on the bridge. A cord line was run from abutment to abutment, along the bottom of the lower string, to indicate every change of position the beam would assume—to see how it would behave itself. The iron was piled on until the slender but sturdy bridge appeared like the famous dwarf in the Arabian Tales, who walked about carrying for his armour a tremendous iron bar on his shoulder. The metal was laid on until 12,000 lbs. arose in a pile above it, still there was no sign of breakage, nor did it give way until 2,000 lbs. more—14,000 altogether—were laid on. It then gave way in the middle, leaving the abutments perfectly sound, a new result, and a desired one, developed, to the great satisfaction of all present. The principle of the bridge is a new composite beam of a straight under string, or chord, united to a top camber elliptical beam by angular thrust braces, angular counter braces and tension rods, the panels being divided by perpendicular posts radiating from the centre of the chord. The camber is not the same as the arch commonly used, by being placed on the side of common truss bridges, but is united as described, making the combination a new one entirely, and one to remedy the evils we are about to speak of. Railroads have developed and called into requisition new combinations to meet new exigencies. The New York and Erie Railroad, above all others, with its numberless bridges, broad gauge and huge locomotives, has afforded great opportunities for testing various kinds of bridges, and this bridge is the result. The effect of the load on the camber is to deflect it, which has a tendency to extend in the direction of the abutments, thereby calling into instant action the thrust braces, with an upward pushing force, to maintain the position and form of the beam, and the tension rods tend to sustain it. By observation on the New York and Erie Railroad, Mr. Post stated that the bridges all fail-

ed at a very short distance from the abutments—this bridge obviated that evil entirely, and its combination presented several "new and excellent points." Mr. McCallum has taken measures to secure a patent.

Sulphur and Sulphuric Acid.

This substance is very abundant in nature, and is found sometimes pure, but more commonly mixed with other substances. Sulphur has some peculiarities. At ordinary temperatures it is solid, when heated to 226°, it melts, and then it boils at 600°, yielding a yellowish gas; at a temperature below 390°, the melted sulphur is very fluid, though not so much as at 240°. If it is now allowed to cool it first becomes thick, then fluid again; when thrown into water at 240°—when fluid—it becomes a hard brittle mass, but if heated to 600° for some time, and then thrown into water, it remains brown and transparent, and is so flexible that it may be drawn into threads; in this state it is used for taking copies of reliefs, medals, &c., and in a few days it becomes hard, solid and sharp in outline, and is used extensively in making casts for the electrotype process.

Sulphur is insoluble in water, but soluble in alcohol, in ether, and some oils, and with bisulphuret of carbon. It combines with oxygen and the metals, and in that state the metals are called sulphurets. It is very troublesome to iron founders, because it requires to be burned in the open air at 560°, to expel it in the state of gas. When this is done it generally frees the iron from its injurious combination,—but few of our founders are aware of this peculiarity, hence the iron is heated up rapidly to 1000°. The roasting of ores (sulphurets) is for the purpose of driving away the sulphur; hence great care should be exercised to conduct the process in a perfect manner. Experience and watchfulness are requisites which should belong to every one who has charge of roasting sulphur ores.

Sulphuric acid is a combination of sulphur 2, oxygen 2; this acid is manufactured extensively in Boston. Sulphuric acid is manufactured in large leaden chambers, the leaden plates of which are joined together by the oxygen blow-pipe—thus they are run together without the intervention of solder, as the common solders would be acted on by the acid. We would recommend this plan to be generally adopted in joining all leaden plates for whatever purpose. Platina vessels are employed to concentrate it, and the acid itself is very extensively used in almost every department of the arts and manufactures. It is used by the silversmith, dyer, bleacher, in the refining of the metals and the making of paints, &c. Dr. Liebig uses this pithy expression—"it is no exaggeration to say, we may fairly judge of the commercial prosperity of a country from the amount of sulphuric acid it consumes." Our moulders use it for cleaning their castings, and our chemists for making soda out of salt.

Coating Iron with Copper.

As we have had not a few enquiries respecting Mr. Pomeroy's invention for coating iron with copper, since we noticed the same about six weeks ago, we will describe the leading features of the patent, so as to obviate future trouble to us, by letter or inquiry about it. The first process consists in immersing the iron plate or plates in dilute sulphuric acid, submitting them to a brisk heat, and then immersing in a solution of clay and water, of such a consistency that a sufficient quantity of clay may coat the plate uniformly, when the said plate is again submitted to a brisk heat, and when dry is ready for the next process. This process is to have a bath of molten copper placed over a furnace to keep it fluid, and into this is dipped the prepared iron plate. Sheet iron so treated should not be kept in the bath but a few seconds, or it will become hot short; after it is dipped it may be run between rollers, to make it smooth. The thicker the iron plate is, the longer may it be kept in the copper bath, and the thicker will be its coating. The coating of copper may be increased with subsequent immersions. All the metal should be covered with the copper or it will oxidize faster than if there was no

coating. It is stated that iron can be coated with brass in the same way as with the copper. The clay coating is the principal feature of this invention, that is, the coating of the metal with clay, preparatory to its immersion in the bath of copper or brass.

The Britannia Tubular Bridge.

On the 21st Oct. (last month) the government inspectors instituted a series of experiments on the great Tubular Bridge. A train of two locomotives and 28 wagons with 280 tons of coal was drawn into all the four tubes. The deflections were ascertained to be exactly three-fourths of an inch under this load, over the immense mass. After a repetition of this experiment, this great train was taken out about a mile and shot through the tube with the greatest attainable velocity, when the deflection was found to be less than when the load was allowed to remain at rest in the tube.

Messrs. E. & L. Clark, the resident engineers, have watched, from day to day, the effect of gales upon the tube, and have stated that the heaviest gales do not produce so much motion over the extent of the tube as the pressure against the sides by ten men. The strongest gusts of wind do not produce more oscillation than one-quarter of an inch. The action of the sun, at noon-day, only moves the tubes about three-eighths of an inch.

If a compass is held over any part of the bottom cells, the south pole is affected, when held over the top cells the north pole is affected. This effect is observable in all parts of the tube, although its position is only 10° of the magnetic meridian. The work on this bridge was commenced on the 13th of April, 1846, and on the 5th of last March the first engine passed through it. It has thus been four years in the course of construction. The effect of two trains running through the parallel tubes at the same time, makes a noise resembling distant thunder. Large models will be exhibited at the Great Fair of the Industrial Exhibition, but we recommend our American friends who go there, if they have the funds and time to spare for such a trip, to visit the Bridge itself.

Patents Granted—Secret Use.

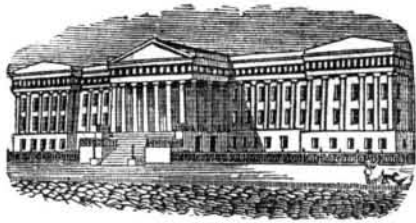
Four of the patents on our list of this week, were applied for through this office. Some of the very best and most successful inventions which have been patented recently, have come through the same source. The march of improvement is still onward, and the progress of invention is steady and firm. Every improvement and discovery applicable to the useful arts, is entitled to the protection of a patent. The secret use of an invention is no security to the continued safe using of it, even by the inventor, for another may discover the same thing, secure a patent and stop the inventor from using his own invention. It is also as easy to keep an invention secret and use it thus, after it is patented, as to keep it secret without a patent,—there is thus a perfect security for the inventor.

West India Mail Company.

This British Company recently held its half yearly meeting at the London Tavern (London.) The disbursements were \$735,580, the income was \$1,134,225 leaving a surplus of \$398,645,—good profits, undoubtedly. There was a general increase on the profit sheet over 1849. Mails are to be carried to the Pacific from England twice every month, according to the recent negotiation with this company and the government. Five new steamships of 2,250 tons, with engines of 800 horse power, like the Asia, are constructing, and will be ready for sea early in 1851. The company is in a very prosperous condition, and are determined to run our Pacific lines as closely as possible, but there is no fear of the American line, they will come off with flying colors.

It is often asked of us, "Is lead used in the whitening of sugar?" It is, but not white lead. It is stated that the lead is all removed from the sugar. It should be made the test of chemical experiment.

The "Southern Press," at Washington, will please to accept our thanks for its courtesy.



Reported expressly for the Scientific American, from the Patent Office Records.

LIST OF PATENT CLAIMS
Issued from the United States Patent Office.
FOR THE WEEK ENDING NOVEMBER 5, 1850.

To Alanson Cary, of Worcester, Mass., for improvement in machines for dressing irregular forms.

I claim the toothed wheel upon the shaft, arranged so that it is capable of being thrown in gear with either of the racks, in combination with the dog on the slide, and the notched projection on the table, by which the slide is locked to, or unlocked from, the table, for the purpose of enabling the wheel to give either a rectangular motion to the slide or a circular motion to the table, as may be required, in the manner and for the purposes substantially as herein set forth.

[This machine is one of the most beautiful and effective in operation that we ever saw; it is not for concentric turning, like Blanchard's, or other lathe machines. It is beautifully adapted for making ivory and other knife handles.]

To Wm. H. Davis, of Maysville, Ky., for improvement in Rotary Pumps.

I claim the two pistons acting alternately with each other as rotary partitions, in connection with the arms and apparatus by which they are worked, substantially as above set forth.

To F. P. Dimpfel, of Philadelphia, Pa., for improvement in Furnaces for Steam Boilers.

I claim the method, substantially as described, of making the box lining of furnaces with a partition or division plate or plates between the inner lining and outer shell, to direct the current or currents of air before entering the fire, substantially for the purpose and in the manner specified.

I also claim the manner of arranging the furnace door with its interior plate or lining, in combination with the tube or apertures for blowing or forcing in air, steam or other cooling medium between the door and said plate, all as herein specified, irrespective of form, and also of the manner of producing the forced current of the cooling medium.

To R. A. Fisher, of Sanburg, Pa., for improvement in Washing Machines.

I claim the arrangement of three vertical presses or washers, in combination with the fan arranged and operated in the manner and for the purposes set forth.

To Junius & Alfred Judson, of Rochester, N. Y., (assignors to Junius Judson,) for improved Valves for Governors.

To A. S. Macomber, of Bennington, Vt., for improvement in Straw Cutters.

I claim the application and use of rotary spiral cutters, which are self-feeding, in combination with a stationary knife, or cutting edge, in the manner and for the purpose, substantially as described.

[See engraving, page 396, Vol. 5, Sci. Am.]

To Wm. McCoy, of Fannellsburgh, Pa., for improvement in Lime Kilns.

I claim, first, the construction of an upper tier or tiers of arches, in the manner herein set forth.

Second, I claim the recesses or openings in combination with an upper tier or tiers of arches, for the purpose of creating a draft through the structure after the lower arches have become stopped up.

To Joseph Pine, of New York, N. Y., (assignor to Benj. Pine,) for improvement in the running gear of carriages.

I claim the axles of the wheels having racks on their inner ends meshing into central cog wheels, the front one of which meshes into a segmental rack on the inner end of the pole of the carriage; the whole being constructed, arranged and operating in the manner substantially as described.

[See engraving, page 236, Vol. 4, Sci. Am.]

To Wanton Rouse, of Taunton, Mass., for improvement in operating the copping rail of cop spinners.

I claim changing the direction in which the ring rail is moved and the speed at which it is operated, for the purpose of governing the winding of the thread on the cop, and forming a bind thread by means of the combination of the shaft, having a toothed wheel and a smaller wheel fast upon its axis, with the shaft having on it, also, a fast toothed wheel and a loose smaller wheel or pinion, operated by shifting belts and pulleys or other similar changing or reversing gear.

[This is a good invention.]

To C. W. Schindler, of New York, N. Y., for improvement in hardening fats and oils.

I claim the hardening of fatty or oily substances, without separating the stearine from the oleine to such a degree that they can withstand a heat of at least 135 degrees Fah. without melting; using for that purpose the ingredients of cera japonica and elemi, in the manner and proportions above described, which will produce the intended effect.

To H. S. Vrooman, of Springfield, Mass., for improvement in clamps for girding emery wheels.

I claim the combination of the screws and toggle joint, with the jaws, substantially as herein described and set forth, for the purpose of producing, first, tension of the girding substance, and then the compound motion of the jaws in closing together and setting down to the object on which the machine rests.

To E. J. Warner, of Waterbury, Conn., for improved mode of fastening hooks and eyes upon caps.

I claim the putting on of the hooks and eyes in such a manner, upon paper perforated as herein described, that the points of the hooks are upon one side of the sheet and the eyes upon the other side, thereby securing the eyes against dropping off from the hooks. I claim nothing in regard to the manner of perforating or folding the paper, nor for any other method of putting hooks and eyes upon perforated paper than the method herein described.

To S. R. Wilnot, of Lafayette, Ind., for improvement in Fly Brushes.

I claim so constructing and adapting the revolving fan or brush, that it may be placed like a lamp upon a table, or may be fixed to the walls or ceiling of a room, or that it may be suspended by a cord over a bed, sofa or cradle, by the means herein fully described.

To John Butcher, of Lowell, Mass., for improvement in apparatus for stretching and smoothing cloth.

I claim the combination of the revolving platform, or table, and the guide roller or apparatus, with the series of stretching rollers, the whole being constructed in the manner and for the purpose as herein specified.

To J. P. Hayes, of Boston, Mass., for improvement in Portable Furnaces.

I claim a summer furnace in which the draft is driven to the fire chamber from the interior of the furnace and the bottom of the same, and passes first up through a flue chamber, (formed between a partition and the periphery of the furnace,) and then down through the fuel, all as herein set forth and for the purpose specified.

To George Starkweather, of Hartford, Conn., for improvement in processes for curing meat.

I claim the method of curing meat by placing it with brine within a vessel and then subjecting it to the combined action of agitation and alternate increase and diminution of atmospheric pressure, substantially as herein set forth.

The Manufacture of brandy is now successfully carried on by John A. Scott, Esq., of Washington County, Miss. It is made from the Scuppernon grape, and is pronounced as good and pure an article as the best French brandy.

The Paris Academy of Sciences has lately given its sanction to a project for the establishment of a system of telegraphic communication throughout Paris.

The Cincinnati Price Current publishes a statement of the number of hogs assessed in 76 counties, which show a deficiency of 246,000 head, compared with last year.

The population of Savannah as determined by the census is about 16,000, being an increase of 2,000 within the last two years. This increase nearly is all of white persons.

Telegraph Patents—Morse's, Bain's, and House's Claims.

Since the decision of Judge Woodbury, in Boston, as published by us in No. 7, two weeks ago, we have seen a great number of paragraphs going the rounds, relative to the claims of Prof. Morse. Some have jumbled the case as if it were a trial of the Bain Telegraph. In relation to this, the Baltimore Sun says:—"There has yet been no such issue tried as Morse against Bain, or against any line working under the garb of Bain's patent, either at Boston or at any other place in the United States, to our knowledge. Nor has there yet been any Telegraph case tried which involves the points of infringement of Morse's patents that are alleged to be involved in the case of the Bain lines.

The foundation of Judge Woodbury's decision seems to have been that printing and writing are two different arts.

In his opinion, accompanying the decision, Judge Woodbury gives to Professor Morse, as the inventor, the exclusive right to use the signs for telegraphing, composed of dots, lines and spaces; the right to record at a distance by means of these with electricity, and the local circuit."

The Philadelphia Ledger commenting on the above, says, "Judge Woodbury's decision says, in plain English, as we understand it, that as House uses the letters of the alphabet for recording intelligence at a distance, he does not therefore violate Professor Morse's patent, who does the same thing by an alphabet composed of dots and lines. The right to thus record by means of electricity and the local circuit, is conceded to Prof. Morse. Admitting the correctness of this decision, there seems to be little ground for Bain to rest his pretensions, using, as he does, all the means which Judge Woodbury concedes to be covered by Professor Morse's patent. As to Morse and Bain, however, suit has been brought in the United States District Court for this district, which will probably be heard by Judge Kane in April next. The suit heard by Judge Woodbury, of Smith against House, will be taken to the Supreme Court in banc, where the whole issue will be reviewed; and if that tribunal should think with Judge Woodbury that the shape of the sign conveying intelligence of a fact, whether a dot and a dash or a letter of the alphabet, constitutes a substantial difference, it will probably be an end of that case. But is there in common sense any substantial difference? Is one a system of writing and the other of printing? Both write but in different tokens. Neither print, for neither multiply copies, which is the essential element of printing."

Without any other consideration but a desire to arrive at the truth, we would ask what is Morse's invention, what is Bain's, what is House's? The public has been so bothered, with one party claiming this, and another that, which belongs to neither, that there are but few who know any thing about any of their claims in essence. By the above comments of the Ledger any person would infer that the difference between Morse's telegraph and House's consisted in this, viz., the one recorded its messages in stenographic characters, the other in Roman letters. If this had been the sole difference, then Mr. House could not have received a patent in 1846; for a printing telegraph was in use before. The "Ledger" says that neither of the telegraphs print, for "neither multiply copies, which is the essential element of printing." We would respectfully correct the "Ledger;" Bain's telegraph does print, if multiplying copies is the essential element of printing, for it can multiply a thousand copies without touching a finger key—no other telegraph does this.

The following is Morse's telegraph claim, to be found in the Patent Office Report for 1846, claim No. 79 of Re-issues—"I claim the system of signs, consisting of dots and lines, substantially as herein set forth and illustrated, in combination with the telegraph for recording signals." This is very plain; if Bain uses a different combination of like characters, then it is surely no infringement, for neither of these gentlemen invented the dot and dash alphabet.

In 1837 Morse used a very clumsy alphabet,—it was a system of V W. If any person will look at Silliman's Journal, Oct., 1837; Franklin Journal, Sept., same year, and Alfred Vail's work, page 75, he will see this alphabet. At that time Steinheil used a dot and curious dash alphabet, but he used a whole alphabet of dots; it is illustrated on page 179 of A. Vail's work, and illustrated in M. L'Abbe Moigno's new French work. "Honor to whom honor is due."

Our idea of the essential element of Morse's telegraph is the Electro Magnet, to make marks of dots, dashes, and spaces, by mechanical action, the pen being lifted up, brought down, and held on to the paper at regular intervals, by breaking and closing the circuit. It is no doubt a beautiful telegraph—it has no superior. Bain's telegraph does not use a magnet nor make mechanical marks; the pen is not lifted from the paper at all, but the signs are recorded by the chemical action of the current, not its mechanical; the two systems, then, are entirely different, for the chemical telegraph pen is never lifted off the paper, the same as the electro magnet pen.

Royal E. House's claims are to be found in the Patent Office Report for 1846; he has seven claims, too long for us to publish, but there is no claim for the use of the Roman alphabet, and it is our opinion that Judge Woodbury was not quite minute and clear in respect to his remarks about the signs used in telegraphing, as mentioned in the paragraph above.

The Iron Trade of England before the Discovery of Coal.

In Henry the VIIth's reign the export of iron from England was very small. Biscay, then as now, the most flourishing part of Spain, was the great iron country of those days. Considerable quantities of Biscayan iron were imported into Liverpool. The quality of the Spanish iron was much superior to that of the English. Camden, speaking of the iron made in the great forest of Andradswald, in Sussex (then the greatest iron district in England) says that it was less tenacious than the Spanish iron, either from nature or want of skill in the manufacture. The forest of Dean was the second iron district in England in extent; and the manufacture was carried on in many parts of the kingdom, amongst others at Bury, and at Furness, in Lancashire. It ceased about Bury in the reign of Henry the Eighth, from want of wood for the furnaces. It was also suspended in the rich mineral district of Furness, in the reign of Queen Elizabeth, for the same reason. There the farm-tenants agreed to pay a bloomery rent to the lord of the soil, on condition that the furnaces should be blown out, and that the young trees, used in the iron manufacture, should be kept to feed their cattle in the winter months. So general was the alarm caused by the wasting of the woods in the manufacture of iron, that an act was passed in the first year of Queen Elizabeth's reign, declaring that no timber, a foot square at the root, should be cut anywhere within fourteen miles of the sea, or of the rivers Thames, Severn, Wye, Humber, Dee, Tyne, Tees, Trent, or any other river, to be used in making iron, except in Sussex and in the weald of Kent, where the forests were then considered inexhaustible. A further act was also passed in the same reign, in the year 1591, declaring that no iron works should be formed any where within twenty-two miles of London. The following are the places at which iron was produced during the reign of the Tudors:—The Weald, or Wild of Sussex and Kent: the forest of Dean, in Gloucestershire; Bury and Furness, in Lancashire; Bloomfield and Raubon, in North Wales; Walsall, in Staffordshire; and Lantrissant, in South Wales.

The annual amount of travel on the Mississippi river is about 500,000. The annual loss of human life for several years past has been over 200; by burning, blowing up, and drowning, to say nothing of sickness.

M. Poitevin lately made a balloon ascent from Paris, with some girls dressed like angels. When they got up to the cold clouds the ladies changed their dresses; all went off safe.