Scientific American.

NEW-YORK, MARCH 8, 1856.

Remarks on the Report of the Commissioner of Patents.

The Report of Judge Mason, which was published in the two previous numbers of the SCIENTIFIC AMERICAN, deserves the serious consideration, not only of every inventor, but every citizen in our country. It is an eloquent, elaborate, and original document. The rapid increase in patent business during the past ten years, is graphically described by stern and incontrovertible rows of figures. In 1845, 1,246 applications for patents were made, 502 were granted; $51,076·14 were received, and $39,395·65 were expended. In 1855, 4,435 applications were made, 2,024 granted, $176,380·57 received, and$179,540·33 expended. There has therefore been a quadruple increase of inventions in ten years. During the past year the expenses of the P. O. have exceeded the income by $3,159·76. These have been incurred for payment of the increased force of examiners and clerks in the Office, for the purpose of making examinations, and executing the business promptly Applicants for patents have not been obliged to wait in suspense for six, ten, and twelve months before their applications were acted upon, as was the case formerly; their applications were acted upon within a few weeks, generally, after they were presented. This has given universal satisfaction; and as the Office cannot go on and do its business correctly and promptly, with an expenditure constantly exceeding its income, our inventors will respond heartily to any reasonable increase in patent fees, for the continued proper and prompt execution of business by the Office. The Commissioner suggests the increasing of the revenue, and charging applicants fees according to the work performed; that is to have a *sliding scale* of prices for examinations. This would be the most just method, but also the most difficult to carry out, unless the scale of fees was rated by the number of words in a specification, or the pages of parchment it occupied—which is according to the English plan of drawing up such documents. The more simple plan for increasing the revenue would be the increase of the patent fee to $40—ten dollars more than the present fee. According to the number of patents granted last year, such an increase of the fee would have exceeded the expenditures by $17,081.

In discussing the evils arising from the want of system and harmony, in deciding upon applications for patents by the different examiners, Judge Mason seems to feel that injustice may have been done to many inventors by rejecting their applications without just and proper reasons. He therefore suggests the creation of a new officer, that of an Examiner in-Chief, whose duty it shall be to review the decisions of all the examiners; or else to have three such officers to form a court, to decide upon difficult and disputed cases. This suggestion appears to be a good one, but Judge Mason is of opinion that it would be very difficult to get persons capable of filling such an office. He says truly, "there is no situation under government for which it would be more difficult to find a suitable incumbent."

The Commissioner also discusses the returning to the old plan of issuing patents without an examination—the office of examiner being only advisory. We cannot entertain the idea of a return to this system upon any consideration. It would open a door for the granting of two or more patents for the very same invention, and the owners of these would so inflict and disgust the community with their claims, criminations, and recriminations, that patent property would very soon become almost valueless.

We cannot agree with Judge Mason in the views which he presents relating to what may be called "the property of inventions." He places an invention on the same basis as the property of real estate, a piece of goods, or crop of grain produced by labor. The rights of inventors to their inventions, he considers, should be perpetual in them and their heirs, as a *natural* right, and the only argument presented in favor of the law limiting patents to a certain number of years, is *expediency*. We could not advocate the abrogation of any *natural* right upon the principle of expediency.—The logical mistake in the Report, as it appears to us, consists in viewing the granting of patents for discoveries, as the conferring of natural rights upon inventors. A patent confers no natural right upon any man. If the law of patents were abolished to-morrow, no man would be deprived of a *natural* right thereby. Every man could invent and use his own machine without let or hindrance, and the common law of the land would protect him in this use. The property of inventions as recognised and provided for by the law of patents, is simply *legal*. J. W. Scott in his opinion in the patent suit of Goodyear versus Day, dated at New Brunswick, N. J., Dec. 13, 1852, clearly explains the nature of patent property. He says "a patent right is strictly legal; it has not one of the characters of *rights equitable*; it is not the right of possession. It is the right of exclusion for a definite period of time, and it is the grant of exclusion by sovereignty and by force of positive statute.' Again he says, "some assert that by the law of Nature, the creature of a man's brain is as much his individual property as the work of his hands, and that the wild Indian who builds his wigwam in the forest, and the bird that suspends her nest from the branch, have each acquired, and do acquire, a title in nature of which it is unjust to deprive them." . . . "Is it worth our time or breath to ask the question, does the bird in the one case, or the savage in the other, acquire any right in nature to prevent others from imitating the nest or the wigwam? The right is exclusively and strictly legal. It is the creature of positive law; its duration is but for a short time, or it could not be endured by a free people."

Were patent property, based on *natural* right, the Woodworth monopoly ought to be continued forever. If it were a *natural* right, it would be wrong in us to oppose its extension—we could not do it conscientiously. Patent property is peculiar in its nature. In a certain sense it is *ideal*, and is totally different in essence from all other kinds of property, excepting that of the copyright in books, which is also legal, and which it resembles in most respects. No class of men have done more to benefit mankind, and advance civilization, than inventors; and patent laws have been enacted as a politic positive means of affording them some remuneration for their gifts to mankind. To fall back on the principles of *natural right*, in relation to inventions, would involve the abolition of our patent laws,—the only positive means yet provided by modern civilized nations for rewarding their inventors.

It affords us great pleasure to witness the hearty and noble sentiments uttered by Judge Mason in advocating a reduction of patent fees for foreigners. Every new and useful improvement introduced into our country—let it come from where it may—is a positive benefit to our people; it is an additional weight placed on that Archimedean lever which is elevating our race. It is a wise and honorable policy to invest the authors of them with legal rights at as low an expense as possible, knowing that in a few years their inventions will come into free and unfettered use, by the public.

We cannot better conclude this brief review of Judge Mason's able Report, than by quoting his own language, in reference to this question. "Fully confident that the interests of the country and the usefulness of this Office would be alike promoted by the course herein recommended, the candid consideration of Congress is again invited to the subject."

Important Patent Decision in the United States Supreme Court.

Israel Kinsman and Calvin L. Goddard *vs.* Stephen R. Parkhurst, appellee.—This was an appeal from a decree entered against Kinsman and Goddard in the United States Circuit Court for the Southern District of New York on the 3d of May, 1851, for $23,220·28, as profits made by them on the manufacture and sale of the Parkhurst Burring Machine, patented by him May 1st, 1845, and which is, in substance, a cylinder composed of narrow thin rings, made of sheet steel, having hooked teeth cut in their peripheries and strung on a light inclined cylinder, with rings of some packing, such as pasteboard between them, the rings of packing being a little less in diameter than the metal rings, so as to leave grooves about 1-16 of an inch deep on the surface of the cylinder between the metallic rings, thus forming a cylinder both stiff and light, to run in connection with carding machines to clean the wool preparatory to its entering the cards. The wool, as the cylinder revolves, being fed to, and caught by the teeth, which form the surface of the cylinder, and drawn into the grooves, leaving the burrs and other foreign substances on the surface of the cylinder to be knocked off by a guard or beater revolving in connection with the cylinder.

Among the defences set up, it was alleged that F. A. Calvert and Charles Sargeant were prior inventors; that Parkhurst obtained the invention from them; that the invention was not useful until made so by Kinsman; and that Kinsman and Goddard did not infringe the patent because they made the spaces or gullets between the teeth small instead of large.

George Gifford, Esq., of New York, who has been counsel for Mr. Parkhurst from the commencement, and in obtaining the decree in the Court below, argued the cause for him, and in favor of the decree in this Court. Charles M. Keller, Esq., who was not in the case in the Court below, argued the cause for Kinsman and Goddard against the decree.

The Supreme Court, on the 26th of Feb., decided the appeal in favor of Parkhurst, affirming the decree, with costs, and ordered interest, thereby overruling the defences and confirming the patent. Mr. Justice Curtis delivered the opinion of the Court.

Gold and its Uses.—No. 1.

Gold is one of the oldest of metals, and has been known and used by all nations—savage and civilized—from the dawn of history. It exists native in nearly every part of the world, as a metal, or associated with other metals It is of a brilliant appearance; a beautiful yellow color; is malleable and ductile, and is transparent in thin leaves. It is fusible at a full red heat; crystallizes partially when slowly cooled, and is not acted upon like zinc, copper, tin, or iron, by ordinary agents. That is, these metals are readily oxydized by some acids, moist gases, and exposure to a moist atmosphere, whereas gold is not readily acted upon by acids, and it stands exposure, untarnished, in the atmosphere for centuries. It has always been the most valuable of metals, owing to its scarcity, its beauty, its unoxydizable nature, and the facility with which it can be worked into any form. It comes down to us as a matter of history, that the ancients were acquainted with a method of reducing gold to fluid, and retaining it for any length of time in that state. We believe this may be set down as fabulous.

GEOLOGY OF GOLD—The present age is most remarkable for great discoveries of gold deposits in possessions belonging to nations whose inhabitants speak the English language. California and Australia have become watchwords for attracting the emigrant from the banks of the Thames, the Danube, the Seine, the St. Lawrence, the Merrimac, the Hudson, and the Mississippi; and the Chinaman from the shores of the Yellow Sea.

No one can tell why it is that gold is found in one part of the world and not in another. If it be true that this globe once existed as a molten mass, gold should be found as a component part, equally distributed among all similar rocks in every part of the world. Sir Roderick Murchison believes gold to be a peculiar production of the Silurian era, and that it is, as it were, "a silurian fossil." The rocks, however, of California and Australia, from which such large quantities of gold have been recently obtained by digging and washing, belong to the primary series, and not to the fossiliferous or sedimentary beds. The primary laminated rocks of our globe are always found more or less on edge, and their vertical cleavage planes are not due to the direction of chains of mountains, for they pass over mountains, but they appear to be due to currents of magnetism, or electricity, which seem to exert a crystallizing power.

Gold is found in scales, and in nuggets or pebbles, of every size. Its appearance is that of having once been combined with the primary slate rocks, and then separated by superficial actions of air and moisture. By the aid of surface moisture, and the absorbing action of the roots of large trees growing on the edges of gold bearing rocks, many of them have been gradually disentegrated and decomposed, leaving the gold behind, precipitated and aggregated into masses. Some of the largest gold nuggets of Australia had been found under such circumstances. It is a common opinion that gold is always found in greatest quantities in *drift*; in the deep still corners, and eddies of rivers, but it has not thus been found in California. On the contrary, it has been found most abundantly in the *ripples*, as they are called, those parts of streams where the edges of the primary gold bearing rocks have been most exposed to the action of moisture and the atmosphere.

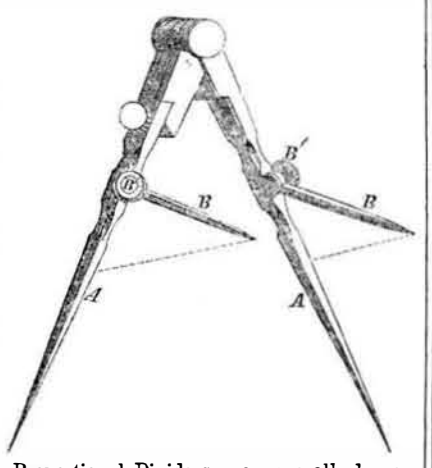
GOLD RESOURCES—The entire amount of gold received at the U. S. Mint and its branches, in 1855, was $55,151,902; of this vast sum, $49,351,789 were domestic produce—nearly all from California. Since 1848 no less than $313,234,000 have been obtained from the California mines. Since 1851, the mines of Australia have produced $200,000,000. The gold produce of Russia is about $6,000,000 per annum, a mere trifle in comparison with that of the United States and England.

The principal use of gold is that of making it into coins, as a medium of exchange to represent and be an equivalent for labor, merchandise, permanent and floating property.

Recent American Patents.

Marble Sawing Machine.—By Schrag and Von Kammerhueber, of Washington, D. C.—This is a very ingenious invention intended for the simultaneous sawing of two sides of a block of marble, the cuts being made at angles or in parallel lines, as desired. Most of the patents heretofore granted for machines of this description have only related to one or two special points, without covering a complete machine. The present patent covers several important points, and inaugurates a new method of operating the guiding and adjusting saws so that the machine, as a whole, may be called original. Without drawings it would be useless to attempt a description. In a future number we shall probably illustrate the invention by engravings.

New Drawing Instrument.—By Henry M. Parkhurst, of Perth Amboy, N. J.—In linear drawings of various kinds it is desirable for the artist to possess some convenient instrument whereby the scale of representation may be accurately changed, either by reduction or enlargement. Such instruments are known as Proportional Dividers, and to this class the present improvement belongs.



Proportional Dividers are generally large, costly, and somewhat clumsy. But the invention here illustrated consists of a simple and inexpensive attachment to the common dividers. A A are the long legs to which the short legs, B, are attached, as shown. This constitutes the chief feature of the improvement. The short legs are fastened by the adjusting screws, B'.

Referring to the cut it will be seen that the spread of the short legs is less than the long legs. In reducing a drawing the dimensions are measured with the long legs, and the short legs will indicate the reduced proportion; if a drawing is to be enlarged, the dimensions are

taken with the short legs, when the increased size will be exhibited by the long legs. The proportions indicated will vary according to the angle given to the short legs; these may be set by a scale, if desired, the scale being attached at the point of junction of the short legs with the long ones. By turning the short legs down to the sides of the others, these dividers may be used like a pair of the common kind.

Dividers of this kind are, in many respects, superior to other instruments now used for the same purpose, while they are much more simple and cheap. Draughtsmen will readily perceive and appreciate the various uses and advantages of the improvement. It forms an accurate, reliable instrument, and, we doubt not, will find an extensive introduction. We regard it as a valuable invention. For further information address the patentee.

Improvement in Bridges—By Peter C. Guion, of Cincinnati, Ohio.—This invention consists in a peculiar combination of the arch with tension braces, whereby it is alleged that greater security is obtained, at less expense than in other bridges. The materials employed are wood and metal. Without diagrams it would be useless to attempt a particular description.

New Method of Excluding Dust from Railroad Cars.—By Joseph Woods, of Jersey City, N. J.—This improvement consists in enclosing all the open space below the car with lattice-work, arranged like the lattices of common Venitian blinds. The enclosure extends from the base of the car down as near to the ground as safety permits, the wheels, &c., being covered in.

The inventors allege that the dust is raised by the air which rushes in to fill the vacuum occasioned by the rapid passage of the car, as it sweeps over the surface of the ground.—They also allege that the lattice-work serves to cause a suction from both sides inward, underneath the car, and that the two currents of air, when they meet, unite, and rush backwards to the rear end of train. The dust, as fast as it rises, is thus drawn in beneath the cars, carried back, and discharged at the rear. The improvement is applicable, at very small expense, to all of the ordinary passenger cars. If it will accomplish what the inventor states, it is an important improvement.

Improved Gold Separator.—By Edward N. Kent, of New York City.—Consists in using a grain separator, for separating some of the metal from the earthy particles, in connection with a crusher. The crusher is of the "Chilian form—two large heavy wheels moving around on a circular bed, the quartz being crushed between the wheels and the bed. The improvement here consists in placing the crushing wheels in a deep basin, and submerging them in water. The exit mouth of the separator empties into a tube which conducts the quartz down beneath the water, and deposits it upon the bed of the crusher.

Cockroach Trap—By C. H. Guard, of Brownsville, N. Y.—In this contrivance there is a curious arrangement of tubes and falls, into which the unfortunate vermin are precipitated. The loss of life among them, when this invention comes into use, will be shocking to contemplate; but housekeepers, we presume will regard the operations of the trap with complacency.

Machine for Cutting out Shirt Collars.—By O. W. Edson, of Troy, N. Y.—This consists of a combination of blades, cams, levers, &c., whereby a hundred shirt collars of the most fashionable form may be cut out almost as quick as a single one by the common hand method. The claims of the patentee will be found in the official list.

Recent Foreign Inventions.

A Stationary Piston for Steam Engines—A patent has been granted in England to C. J. Symons, for constructing a steam engine with a fixed piston and a movable horizontal cylinder supported on a pair of wheels, and which has attached to it a bracket connected to a rod to communicate motion to the crank.—None of our engineers, we presume, will blunder on the construction of such an engine.—To make the steam drive the cylinder instead of the piston, may be a novel method of applying steam, but not a good one.

Spiral Railway Spikes—A patent has been taken out by George Hopper, of London, for a new railway spike for fastening the chair to the sleeper. The spikes are twisted spirally, so that they revolve when driven into the sleeper, and hold the chair to the seat with all the firmness of a screw. The round part under the head is tapered conically, so as to fit with accuracy the hole in the chair, by which means any side vibration of the rails is effectually prevented. The London *Railway Gazette* says, respecting it, "Mr. Hopper has already made nearly 1000 tuns of spikes, and has recently taken out another patent for an improved form of "swaging rolls" to facilitate their manufacture. While the cost of ordinary wooden treenails is £4 per 1000, the cost of the improved spike varies according to the price of iron, from 70s. to 110s. per 1000; but as they may be guaranteed for 20 or 30 years, they may be considered much cheaper in the end."

About eight years ago, a Boston mechanic brought a spike of the same kind as the above described one to our office, and left it with us for some weeks. He once intended to apply for a patent, but why he did not we cannot tell. His spiral spike was intended for ship-building; it could be driven home without boring, as it was so made that continued blows on its head made it enter timber like an auger.

Concentrating the Coloring Matter of Fresh or Spent Madder—E. J. Hughes, of Manchester, patentee.—This inventor takes a fibrous or porous substance, such as cotton, wool, or sponge, and steeps it in a mordant calculated to combine with the coloring madder, &c.—When the material is thoroughly saturated, he subjects it to the action of the necessary processes to remove the acid and thoroughly precipitate the mordant on the material, as is usually done in calico printing. He then puts the material thus prepared into water with the madder or any preparations thereof. He heats the water, and leaves it a sufficient time to allow all the coloring matter to combine with the mordant fixed on the material, after which he exposes the material to the action of a strong acid, such as sulphuric, muriatic, &c., either slightly or much diluted, for a sufficient length of time to dissolve or decompose the mordant, and carbonize or dissolve the fibrous or porous material. When this is accomplished he puts it on a filter and washes and neutralizes it until the acid is removed. The residue is then the concentrated coloring matter he wishes to obtain.

For the delicate pinks on fine muslins this is a good plan of obtaining a refined extract of madder color; but for common purposes, the process appears to be a very expensive one.

Generating Steam by Friction—H. Dembinski, of Paris, has taken out a patent in England for obtaining heat from friction to generate steam. The object of the invention is to generate steam without combustion. We cannot understand how M. Dembinski is to obtain his power to work his friction rods in generating steam, excepting by the employment of mules to turn the crank. It is very evident that he cannot generate as much steam by friction as will work his friction apparatus.

Boiler Furnaces—T. Barling, of London, has obtained a patent for constructing fire bars and furnaces as follows:—The fire bars are hollow, and steam is forced into the chimney, to increase the draft and keep them cool. The fire bridge behind the grate is built close up to the boiler, and the gases of combustion have to pass through the solid fuel and the grate spaces to the bottom of the boiler and the flues.

Accoustic Railroad Signals in Great Britain—An invention for signaling on trains has been tried on the South-Western Railway, England. The apparatus consists of a gutta percha tube extending through the whole length of the train. It is formed in sections—a joint for each car—and these are fastened together when in use. This tube is connected with an air-pump in the front, and at the end of the train. By a stroke of this pump the air is forced through the tube to the opposite end of the train, and produces a very loud and shrill whistle at the mouth-piece attached to the tube in each guard's van, and to a mouth-piece which extends also close to the engineer. Printed instructions are placed in the hands of guards, engineers, and stokers, which state that one whistle means "look out," two whistles signify "caution," and three whistles denote "danger." Its object is the same as the bell or gong used for signalizing on our trains, and is, in our opinion, not an improvement.

Selling Patent Property by Sample.

MESSRS. EDITORS—In Maine they have a law to prevent citizens of other States selling goods by sample there without a license. Can this law be made to apply to patented articles? or can a patentee be compelled to purchase a license to sell in any State an article which the United States Government has given him the exclusive right to make, use, and vend for a limited period? O. L. R.

Dover, N. H., Feb. 18, 1856.

[This is a simple question relating to the judicial power of a State in making a law to regulate the sale of property or merchandize. The State of Maine and every other State has the power to make such a law as that referred to; and it includes "patent property" the same as common merchandize. A patent does not confer any privilege upon an inventor in regard to his property in making and selling it in any State, which any other citizen does not possess in regard to any other species of property recognized by civil and common law. The Government, by patent, grants to an inventor the exclusive right to make, sell, and use his invention for a limited period, but this simply means that no other person can do so without his consent. The law mentioned above is an act for the regulation of trade within the borders of a State; it does not take away any natural right which an inventor possessed before his patent was granted; and it does not place his property on a different platform from that of other property belonging to other citizens. Were the case otherwise, the United States would have to become a party in patent property suits. In relation to such a question Judge Hopkinson says.—

"On a careful review of the Patent Laws of the United States I have found no indication of an intention that the United States are to be brought in as a party to a litigation respecting the validity of *any* rights claimed or denied under these laws. On the contrary, these rights are considered as the private rights of the party who has obtained them, and are afterwards to be impeached and defended as such."

Making a Needle.

Needles are made of steel wire. The wire is first cut by shears from coils into the length of the needles to be made. After a batch of such bits of wire are cut off, they are placed in a hot furnace, then taken out and rolled backward and forward on a table until they are straight. They are now to be ground. The needle pointer takes up two dozen or so of the wires, and rolls them between his thumb and fingers, with their ends on the grindstone, first one end and then the other. Next is a machine which flattens and gutters the heads of ten thousand needles an hour. Next comes the punching of the eyes; and a boy does it so fast the eye can hardly keep pace with him. The splitting follows, which is running a fine wire through a dozen, perhaps, of these twin needles.

A woman with a little anvil before her files between the heads and separates them. They are now complete needles, but are rough and rusty, and they easily bend. The hardening comes next. They are heated in batches in a furnace, and when red hot are thrown into a pan of cold water. Next, they must be tempered, and this is done by rolling them backward and forward on a hot metal plate. The polishing still remains to be done. On a very coarse cloth needles are spread, to the number of forty or fifty thousand. Emery dust is strewed over them, oil is sprinkled, and soft soap daubed by spoonfuls over the cloth; the cloth is then rolled hard up, and, with several others of the same kind, thrown into a sort of wash-pot, to roll to and fro for twelve hours or more. They come out dirty enough; but after a rinsing in clean hot water, and tossing in saw dust, they look as bright as can be, and are ready to be sorted and put up for sale.

Wonderful Presence of Mind of a Railroad Conductor.

Recently, while the Eastern and Western trains were out of time at night on the road, one of them was unprovided with a lantern, in which case the conductor went ahead of the train with his own lantern, while the train followed slowly at a distance behind. Unfortunately, his lantern went out just as his ear was struck by the noise of the Western train rapidly approaching. The night was so dark he could not be seen, and he was not able to raise his voice above the wind and the noise of the passing train, so as to attract the attention of the engineer. His first resort was a club. He seized one and threw it at the locomotive, but the wooden missile glanced off from the engine without making a noise. The train was flashing past. Taking his own lantern, he hurled it at the lantern of the passing locomotive just as it came opposite to him. The crashing glass and the extinguishment of the light startled the engineer. A sharp whistle was heard, the brakes were shut down, and the train stopped. All was safe, when but for the throwing of that lucky lantern scores might have been killed and wounded. But how stupid and reckless it was for the train to be going on without a lantern.

New System of Weights and Meauress.

We have received quite a number of communications on this subject, since we published the articles of Mr. Wilcox, on pages 134 and 142. It is impossible for us to present a tithe of the substance contained in these communications. Some of these agree with the views of Mr. Wilcox, others do not. All, however, agree in the necessity of a reform in our systems of weights and measures. We must therefore tell Members of Congress that there are hundreds of thousands of our citizens expecting they will do something before this Session closes in relation to effecting such a reform.

American Turret Clocks for Siam.

We learn that John Sherry, Clock Manufacturer, Sag Harbor, N. Y., has received an order for three turret clocks for Siam, one of which is designed for the King's Palace. These, it is said, will be the first turret clocks ever introduced into that Empire. The order is in good hands. The SCIENTIFIC AMERICAN goes almost every where, and among other places to Siam. We have several subscribers there, and presume it was in consequence of some notice in our paper that Mr. Sherry received the above commission.

Stone Tortoises, Hyenas, &c.

The St. Louis *Democrat* states that Dr. Hayden, a young man of that city, a devotee of natural science, has collected gems of the science from the regions surrounding the Missouri river. These gems consists of fossil tortoises of immense dimensions, sea shells of infinite variety and beauty, (an ammonite, of a single curl, twenty-five inches in diameter and a foot in thickness,) skulls of the hyena, the crocodile, monkeys, petrified forest trees, and varieties of fossil flora, are a few of the specimens that make up a various and wonderful collection.

Photographic Pictures on Silk.

Daguerreotype pictures are fast disappearing in our city. Photographs are rapidly driving them out of existence. The correctness of the photographic pictures now taken by our best artists, is remarkable. We have also been highly pleased with the beautiful photographic pictures taken on silk and glass, by Mr. Charles. R. Meade, No. 233, Broadway. If a person wishes to have the likeness of his beautiful self taken on silk, Mr. Meade can do this for him on a white silk handkerchief; and unlike one taken on paper, or a metal plate, this picture, like his face, can undergo ablutions without being effaced. Whether it be owing to the nature of our atmosphere, or the superior skill of our artists, we cannot tell, but their photograph, daguerreotype, and ambrotype pictures far surpass those taken in Europe.

A line of powerful screw propeller steamers is shortly to commence running between New York and Cork. Some wag says that it is to be called the Cork-screw Line.