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NEW-YORK, JUNE 19, 1852.

Courts of Equity.
Any order, long accustomed to wield great power, becomes arrogant, over-bearing, and dogmatic. This is true of all those who exercise un bounded authority, especially when there is a feeling of security from long, or anticipated possession. It makes no matter whether authority is exercised by a despot or a council, the one is just as bad as the other, when they act out the same principles. It is in' human nature to become domineering and reckless of consequences, when pride and passion are placed in the one scale against justice and rectitude in the other. A religious order may commence existence with a high and noble standard of morality, and at the same time those principles may be based upon a most excellent stratum of benevolence and meekness, but let that same body exercise its influence for a long time under popular ravor, with out opposition to keep it humble, and it will -for all the history of the past proves itbecome haughty, "heady, and high-minded," it will become the very reverse of what it was when it commenced upon a career of no-
ble effort with the most noble motives. If it be so with religious orders, we can mor strongly assert it is so with those bodies devoted to the transaction of political or legal duted to
ties.
Last

Last week we said a few words upon the subject of a change in the Judiciary System of the United States, and in another col umn of this number will be found the form of petition praying for that change, accompanied with some very excellent and temperate remarks upon the subject. They express the opinions of one who is practically acquainted with all the evils of our United States Equity System and who is distinguished as a protessional man and inventor, and who possesses legal, mechanical, and scientific qualities of no ordinary character.
砳Our U. S. Chancery system-our Courts of Equity-often act upon the very opposite principles for which they were anciently instituted. They were created tor the purpose of mitigating the rigors of some just law-tempering mercy with judgment-but some of our
U. S. Judges have made decisions of a most U. S. Judges have made decisions of a most arbitrary nature in many particular cases, and instead of mitigat:ng the rigors of cummon law, they have acted in the most cowardly manner, by being afraid to trust to its justice and clemency; they have made decisions above all law-common and statute. Our
Courts of Equity have failed entirely to carry out the principles for which they were instituted; we only reter to cases wherein facts have been at issue, not questions of law. If our Courts of Equity acted as sound interpreters of law only, all would be well, but we have frequently equity without law, and this is always dangerous to the public weal. We are alluding to cases of patents.
A patentee believes or supposes another younger patentee has a machine something like his; he applies, by his attorney, to a U. S. Judge for an injunction to restrain the de fendant-the younger patentee-from using his machine. The defendant denies the claims of the complainant, and a day is appointed for a special hearing of both ${ }^{\text {- parties. But this }}$ preliminary to a hearing of both sides may be coupled with the odious issuing of a partial injunction against the defendant, however innocent he ray be. In the meantime a number of questions are prannyed a certain num-
ber of witnesses of suti shdes; these are taken down in writing, and are to be used before the Court. The one side, by the most respectable testimony, proves there is no similarity in the two machines, while the other proves there is. The testimony is contradictory; it is a question of facts, and one which our Constitution asserts should be tried by a our Constitution asserts should be tried by a
Jury. Both partiess come betore the judge, and in one case which took place in Philadelphia last year, we have before us three large volumes of testimony, some of which was presented by the most distinguished men in our Jury, but the judge pooh-poohed at all the
testimony on one side, and ordered a perpetual injunction, with the
defendant's property.
Judges ot our Equity Courts often make very startling decisions; thus, for example, a judge recently decided that a certain saw, for tongueing and grooving, embodied the
principle of the Woodworth patent, while principle of the Woodworth patent, while Woodworth himselt, while living, asserted claimed by him. It is a sad thing for the administration of justice in our country, when a Judge presumes to judge of both law and facts, and when he takes up a board, and by looking upon it, decides that he knows the principles of a machine better than those who saw it
operate-says, they are mistaken, numerous operate-says, they are mistaken, numerous
and respectable though he admits them to be and decides at once, arbitrarily, against all the testimony on one side. These things will effect their own cure. The honest and just agitation has commenced, which will, in the course of time, bring down such arrogant pretences to the platform of common sense, justice, and lequity, in deed-not tyranny unde its mask.
Light Houses and our Light-House System. A Board or officers, consisting of Com. Shu brick, U. S. N., Commander Du Pont, Gen Totten, U. S. Engineers, Lieut. Col. Kearney Topographical Engineers, Prof. Bache, U. S Coast Survey, and Leut. Jenkins, U. S. N. Secretary, was appointed, and received instructions rrom Hon. Thomas Corwin, Secretary of the Treasury, on the 21st of May 1851 , to examine into and report upon our 1851 , to examine into and report upon our
Light House System. They have done so Light thouse System. They have done so
and their report states that the Light House and their report states that the Light House
establishment of the United States does not compare favorably in economy with those of Great Britain and France. It is admitted in the report that the difference for maintenance per lamp, in a year, is sometimes in favor of those in this country, yet we are a long-shot behind the European lights in management \&c. In 1832 Congress passed an act to have two sets of dioptric or lenticular lens apparatwo sets of dioptric or lenticular lens appara-
tus, and one set of reflector apparatus of the tus, and one set of reflector apparatus of the
most improved kinds imported, set up, and their merits, as companed with apparatus in use, tested by full and satisfactory experiment. The report asserts that no such satisfactory experiments were ever made, except a lens apparatus placed in each of the towers at the highlands of Navesink, and fourteen out of the fifteen reflectors placed in the Boston Light House. A second order of lens, to test the plan of Mr. Isherwood, of discriminating one light from another, and the distance of a vessel from a light, was placed, by order of Congress, at Sankaty-head, Nantucket, and lights were placed by the Topographical Burea, on Brandywine shoal, Carysford-reef, and Sand-key. This is all that has been done to keep up light-house improvements in the United States with those of France and Great Britain. The report makes out the present lighthouse system of the United States to be miserable and inefficient. The floating lights are set down as comparatively useless for want of efficient lamps and parabolic reflectors. The
modern light-house towers are asserted to be modern light-house towers are asserted to be
inferior in point of materals and workmaninferior in point of materials and workman-
ship to the older ones,-Sandy Hook lighthouse, built in 1762. is better than the lates edition of a light-house tower. This is certainly disgraceful ; it is plainly stated that there is not in useful effect a single first-class light on the coasts of the United States." The "onclusion to which the Report cones is, tha "the present Light-house System of the Uni-
ted States requires a thorough organization to insure to the service efficiency and economy therefore it is recommended that there shoyld be a Light-house Board organized, composed of scientific civilians, and army and navy officers, to be charged by law with the entire management of the light-house establishment of our country."
When we consider that the United States of America is the segond greatest naval power in the world, and that in a very few years, if we progress as we have done, it will be the greatest, it is a shame that we have such a miserably managed light-house system. It is asserted, in the Report, that Scotland stands at the head of all nations for her light-house
tinguished men, Sir David Brewster and Allan Stephenson, the eminent engineer. There is nothing to hinder the United States from having as good a light-house system as any other nation; she should have the best, and if things were managed in Washington as the should be, we would have the best.
While we have said this much, it would be wrong not to mention that S . Pleasonton, the Fifth Auditor, had made a reply : he asserts hat the Report of the Board is full of er rors. He indeed makes out our light-house ystem to be conducted more economically, so ar as dollars and cents are concerned, but that is no evidence of error in the Report of the Board,--a penny candle is cheaper than a huge argand lamp, but what proof is that of its effiency The Report of the Auditor present no evidence to prove that we have lights to compare with those of other nations, indeed we know when he speaks of the good lights bout New York and the Hudson river, he is wrong: they are miserable as compared with the Toscar, the Skerrevore, and other lights on the coasts of Ireland and Britain. Now
we want better lights on our coast, not your penny-wise and pound-foolish kind, but those of the most improved construction, if they do cost more than those now employed.
Sperts oil is the kind in use for our light houses ; "colza oil is employed in the French and English light-houses; it possesses the advantage remaining fluid at a temperature below that which thickens whale oil; it does not congeal above $21^{\circ}$; it is said to be better and cheaper than spermaceti oil; but the great advantage which it possesses over the ther oils is, that it does not char the wick so readily; it will also burn in the Fresnal lamp and the single argand burner, with a thick wick, during seventeen hours, without trimming the wick. Spermaceti oil is cheap er here than the colza; still, we have no doubt but sone vegetable oils, such as rape might prove to be as good, and certainly much cheaper titan the sperm. An objection to the Fresnal Light, which is recommended by the Board, if, it requires more attendance, and thereby entails more expense. Capt. Canfield, ofthe Topographical Engineers, whohas erected a light on a shoal in the Straits of Mackinaw, has made a valuable improvement to do a way with the constantattendance of a watchman. The lamp has only a single light, and if this were to go out by accident, all would be total darkness; a constant watchman is usually required to prevent such a result; the mprovement is the attachmentof a bell which will commence ringing whenever the light goes out. It works by the expansion and
contraction of a copper tube when heated and contraction of a copper tube, when heated and answer perfectly.

## Prolits of Patents.

In our last number there was a small exract about the profits derived from the Woodworth Patent. It is well known to our readers that an extension of this patent has been prayed for, and arguments have been set forth by C. M. Keller in favor of the extension. A pamphlet has been published, and is now before us, which presents arguments against the extension. It is asserted from the facts set forth by the counsel for the extension, that the gross earnings of the patent amount to $\$ 15,000,000$ per annum. Mr. Woodworth sold the extended term of the patent for $\$ 100,000$, as was stated by Senator Dawson. In 1842, John Gibson, of Albany, purchased a right for $\$ 4,800$, seven months before the first extension was granted; he had run five machines for the ten previous years. There are
1000 Woodworth machines in the United States; each dresses 10,000 feet of boards per day. The owners of the patent get one dollar of tribute per thousand feet, which amounts to $\$ 10,000$ of clear profits per day. The price paid to the licencees for planing a thousand feet of boards is $\$ 5$ : after paying $\$ 1$ they have $\$ 4$ for all expenses. This pamphlet states that the whole cost of planing boards is only $\$ 2$, therefore the clear profits of each machine is $\$ 30$ per day. The pamphlet also states that the machine of George W. Beardslee, which was illustrated in our columns, can plane 1000 feet of boards; in the best possible manner, for one dollar; therefore, as the Woodworth machine is more expensive, is a
tax upon the community, it concludes that it is wrong to bolster up an old and inferior invention. The logic of it is this : that the support given to the Woodworth machine retards improvements, and taxes the community by a law for an invention inferior to another one. This is a critical point in judging upon such matters; we are afruid that it is often overlooked by our courts. It is the fortune of war-no, not war, of progress-that what was a good invention some years ago, is not a good one to-day; at least it has been superseded by a superior improvement. Unless ree scope is allowed to genius in the use of mproved machines, we cannot expect to advance in mechanical improvements. The very spirit of patent laws "is the promotion of the useful arts." We have seen many paragraphs respecting the profits of the Woodworth patent, and have seen no contradictions of the same; there may, however, be some room for corrections.

Arrenting coninazrationa in Cities:
In the Merchants' Magazine of this month R. Hare, of Philadelphia, proposes a system or arresting conflagrations. His project is to employ locomotive fire engines, with the addition of powerful pumps and high wheels or running on the pavements. He also recommends that a steamboat should be provided with powerful apparatas for throwing water, and propelling to any practicable distance. He also suggests that water reservoirs should be placed on the tops of buildings for keeping roofs wet in case of fire. A stationary engine, he believes, might operate on fires throughout the whole ramification of hydrant pipes.
None of these plans are new-but if good they are none the worse for that. In London there is a fire engine steamboat; it belongs to the fire brigade, but is of very little use, and has only been once used in a number of years. A steam fire engine by Ericsson is illustrated on page 347 of Ewbank's Hydraulics. Stationary engines have been employed in some of the European cities, and many of our houses have fire tanks on their roofs; French's Hotel that was recently burned in our city had one. Steam fire engines would be too slow in being brought to operate on a fire; but they would be very effective when brought to bear. We have no doubt but one could be made to throw a stream of four inches in diameter 100 feet high; this would soon put out a fire.The expense of steam fire engines would, however, be very great; therefore we advo cate more fire-proof houses, and an efficient hand fire-engine department in preference to other plans.
We have been informed that the engine No. 5, which was so successful in Brooklyn two weeks ago, having beat all the rest, was not weeks ago, having beat all Mre rest, was no
made in this city, but by Mr. Jeffers, of Pawtucket, R. I., whose engines have been fre quently noticed in the Scientific American.

## Water for Brooklyn.

On Tuesday evening, the Sth inst., Alderman Marvin, as Chairman of the Committee on Water, made a report to the Common Council on supplyieg the city with water. It stated that the surveys had been completed by Mr. McAlpine, the State Engineer, and his Report was presented. The Committee were of opinion that the plan contemplated in the Re port was the best that had been presented. This plan is to supply Brooklyn with water collected from a number of streams on Long Island, which are to be conducted to a large Reservoir, and pumped by steam power to the highestlevel in Brooklyn. Itassertsthat provision should be made for a supply of 250,000 inhabitants, or $10,000,000$ of gallons per day. The waters which Engineer McAlpine has examined have been analyzed by Dr. Chilton, of New York city, and have proven to be of extraordinary purity-more so than the Croton. The Common Council of Brooklyn have, at the recommendation of Mr. McAlpine, authorized suitable gauges to be placed in the several streams referred to in the Report, and the employment of a competent person to make a daily examination of the quantity of water furnished by each, and to keep a record of it.
This is a prudent measure ; Brooklyn will yet have a good supply of water, but it will always be more expensive than the Croton which supplies New York.


Reported Officially for the Scientific American LIST OF PATENT CLAIMS





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tine driving cam, the cam being formed of two pat

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## Here at Jina Eabora

RAT TRAP-By John J. Vedder, of Schenectady,
N. Y : $:$ Iclaim the employment of the pulleg, cords and inclinediutiting paspasage, the whole being. arran-
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Nots-We call aformation announced in the preamble to anr. Root claim on Cultivators. The argument is forcible, the language unmis takable, and is certainly very credit
able to the accommodating spirit of the Examine Mr. Rogers will please to consider his claim as not embracing "all means for effecting the same result.

## Valley of the Amazon.

About a twelve month since, Lieutenant Herndon, of the United States Navy, was deputed by the Department to make an explo ration of the great river Amazon, from its sources in the mountains of Peru to its junc-
tion with the Atlantic at Para, Brazil. This duty has since been performed, Lieut. H. having reached Para, and joined there the U.S brig Dolphin. He made the voyage down he Amazon in a bark canoe and almost mens were gathered during the exploration.

## The $\begin{gathered}\text { For the Scien tifif Amarican } \\ \text { Refor }\end{gathered}$

Judiciary Syatem
Virgiania and Pennsylvania have just emerged from one of the relics of despotism, in the judicial branch of their governments; that is from the appointment of judges for life or during good behavior; and having adopted the Republicanor Democratic doct ne, of electing the judges by the people for a mited number of years, it behooves the people to remove the same dangerous feature from
Judges tor life like all th
Judges tor life, like all other men similarly situated, such as monarchs, emperors, and individuals in whom power for life is entrusted soon become usurpers and despots, in the consciousness that none but a very grievous overt act, amounting to misdemeanor, could result in a successful impeachment and removal from office. The consequence is, that the province of the jury-box is trodden undar foot: impor tant questions of fact are decided by a "single "court;" decided too often on vainly assumed hypothetical fancies, amounting to specula-tion-possessing no solid practical capacity either for usefulness or for reliance as a true basis; and when the decree of the one-man
goes forth, and injunctions issue, without security to indemnify the parties, in case they ultimately show them to have been wrongfully issued,-they spread a desolation through the business and property of the citizens of the States, worse than the pall of death, tor there is no hope of salvation or redress for the injury done by the one-man called the court and no opporturity to recover themselves in the case before a jury of their country, ere to tal ruin has been their lot.
Attempts have been made, under the Constitution, to prevent the Federal judge from assuming suchomniscient and oppressive powers; but all seems to be of no avail against the natural tendency of man's nature, when intrusted with too much power, to become exclusive or despotic, and oppress his fellow man, under the assumed mask of superior discernment or great learning in sciences or arts or other subject matter to which the question of fact at issue in the case belongs; the truth being, that nine times in ten the power, and a real ignorance of the mutter, begets an assumption of knowledge; because the Chancellor or Judge, having no practical experience in the much he really knows nothing about, and hence, in the absence of time, intense study opportunity, and capacity to learn, heassume that he knows everything; for he cannot see the extent of the field of knowledge both ex-
plored and unexplored, that is before him. This is all quite natural; but it is repugnant to the spirit of our government and oppressive to the people.
The Act of 1789, section 16, "that suits in equity shall not be sustained in either of the Courts of the United States, in any case where plain, adequate, and complete remedy may be had at law," is left discretionary with the
Judge, and therefore becomes a nullity on the statute book.
The Act of February 13, 1807, which dea district nor shall an injunction be issued by had a reasonable time to apply to the Circuit Court for the writ," becomes also a nullity on the statute book, as it is left discretionary with the district judge to say what constitutes plainant have waited a whole year, when the district judge is known to be predisposed on general impressions and in general temperament in their favor, finally, in the absence of circuit judge, who is known to have no for inperament, the district judge is moved granted, no matter how greatly in error or ignorance the judge may be,-they are granted without security, and the citizens of the States -and all their freehold and personal property, and contracts inseparably connected with the subject matter, if it be a machine or otherwise, are laid prootrate in the dust before this Federal power, and they have no redress, albefore them ther than Before this Republic was established, it was Before this Republic was established, it was
a maxim that the Crown (eonsisting of one
man) could do no wrong. Now it is, that the Court (consisting of one man) can do no wrong. The principle of the one-man powe is the same in both, disguise it as we may, whether in the word Crown or in the word Court. Our ancestors did not believe the former then ; we do not, and ought not to, believe the latter now.
Already the voice of New York, in a reso lution to Congress, has gone up protesting against and denouncing such oppression. The Key Stone State, Pennsylvania, ever true to a Democratic Government, has declared that her Judges shall be elected for a limited period by the people, and put upon her statute book the law of May 6, 1844, declaring " No injunctions shall be issued by any court or judge, until the party applying for the same shall have given bond, with sufficient sureties to be approved by said court or judge, conditional to indemnify the other party for all damages that may be sustained by reason o such injunction." And it is quite time that similar features had been engrafted upon the Judiciary System of the United States.
The many wrongs heretofore inflicted, by Federal Judges assuming too large a jurisdiction and knowledge over facts, have awakened the people to a full sense of the insecurity of their situation; for no man knows where such doctrines and decrees will fall next, and blast all his creditand prospects, withouta trial by Jury, and without security, or opportunity for redress-and have compelled many of the citizens to raise their voice, in the following petition to Congress, in which we trust every State in the Union will join, as it is purely republican, in accordance with the nature of our Government, and already impressed upon the statute book of Pennsylvania and several other States
To the Hon., the Senate and House of
Representatives of the United States
in Congress Assembled:-
The Petition of the undersigned, Citizens of the State of ——, respectfully represent to your Honorable Bodies, the necessity of a change in the Judiciary System of the United States, respecting the appointment of Judges, and the power they have assumed over both law and facts, in granting injunctions without trial by Jury, and without adequate security to the party enjoined, all of which is contrary to the spirit and true character of our govern ment, is of despotic origin, contrary to the spirit of the government of this State, destructive of business security, and oppressive to the

And pray Congress to propose an amendment to the Constitution, providing that the Judges of the United States Courts shall be years.

Also to pass a law prohibiting the issue of writ of injunction, unless the complaisant shall first give security to indemnify the defendant for all loss and damage; and providing that the defendant may stay or raise the injunction on giving like security. And that all issues of fact both in equity and at law shall be tried by Jury.)

Repbulican Justice.
The Country for the Consumptive.
A correspondent of the Philadelphia Ledger, medical man, writing from Rock Harbor Lake Superior, says it is the country for those laboring under consumption, who are not too far gone with the disease. The air is so pure and dry, that it imparts elasticity to the spirits, and infuses new vigor in the system. He has had the charge of a small community o 100 souls, not one, during the pastwinter, has had a cough. From November to April not a drop of rain had fallen, and although the temperature is much lower than in the Atlantic States, the people do not suffer so much from the cold as they do where the climate is more moist and the temperature higher.
The "N. H. Statesman" says it is understood that the daughter of the late Benjamin Thompson, (Count Rumford) who has been residing for several years in the Rolfe Mansion, now her property, on the intervale near
the lower end of Main street, in Concord, $N$. H., is proposing to re-cross the Atlantic.The Countess," as she is called, is more than 70 years of age; and has severa

