

Scientific American

NEW-YORK, AUGUST 20, 1853.

Patent Law Suits—Sewing Machines.

A suit for libel has been commenced against the "New York Tribune," by Elias Howe Jr., the patentee of the first machine for using a needle and shuttle in sewing. The suit is instituted because the "Tribune" published the advertisement of I. M. Singer & Co., owners of the Singer Sewing Machine. That advertisement stated that "E. Howe had published falsehoods in saying that he (Howe) had obtained an injunction against Singers' Sewing Machine." It also stated that "it was equally untrue that Howe had the original sewing machine," and it invited all to come and examine the original one, made twelve years before Howe's was heard of; asserting at the same time, that it was the invention of Walter Hunt, of this city. E. Howe, Jr., obtained the first patent in America, for a machine which used two threads and made the lock stitch. In a trial which took place at Boston, Howe vs. Le Row & Blodgett, for an infringement of the plaintiff's patent (see page 356, Vol. 7, Scientific American) the claims of Walter Hunt to the invention of the shuttle and needle sewing machine were introduced, but were considered of no importance, and the plaintiff gained the case. The claims set up for Hunt's machine are a forlorn hope, and when Mr. Le Row, before his suit commenced, informed us that he relied on such claims, we told him that his case rested on a sandy foundation; the result in that case strewed such claims to the winds.

We certainly do not think that Mr. Howe is justified in suing the "Tribune" for libel, but neither was it right for that paper to admit the advertisement of Singer, containing, as it did, such pointed and offensive language. The "Tribune" stated "it did not believe there was a man mean enough to sue them for libel under such circumstances, nor a lawyer to be found mean enough to undertake the case." The "Tribune," we believe, never intended to hurt Mr. Howe's feelings nor injure his business, but lawyers can be found to advise almost any measures, to make the "penny fee." The Hon. Wm. H. Seward, U. S. Senator, is Mr. Howe's Counselor in patent matters, but with this case of libel he may have nothing to do.

This case affords another illustration of the defectiveness of our United States Chancery Courts with their miserable old and complicated slow machinery. The means for trying and deciding disputed patent cases should be ample and rapid in bringing them to a conclusion; instead of this, there is the same see-saw snoringly-draw system in existence now that there was fifty years ago. Some patent cases before our United States Courts might well be represented by a snake with its tail in its mouth endeavoring to swallow itself. The case must first appear in equity and then eminent lawyers must speak on it for three or four days, going over the whole history of the invention; then it may be carried before a jury, and then up it will go, perhaps at the end of fourteen years, to the Supreme Court at Washington. When application for an injunction is made to a judge, on a patent which has never been tried at common law, he should at once, if it is demanded by the defendant, order a trial at the next session. This course would save much to patentees, and soon bring the matter to a conclusion. It would also save the public from being inflicted with such quarrels as those of Howe and Singer, Goodyear and Day—the india rubber case—not yet terminated, we believe. Among the many new inventions which are still wanting to benefit mankind, we recommend inventors to try their genius and skill in improving our United States Courts in patent trials.

Can you Recommend the Scientific American?

We hope our readers will not overlook the splendid prizes offered for the largest lists of subscribers—for \$1,40, to clubs of twenty and over, a journal can be procured abounding in valuable information upon every branch of industry. Those who have taken the Scientific American need no urging, but we should re-

gard it as a great favor if our subscribers would call their neighbors' attention to it. Can you not recommend it as a paper of rare usefulness? Do so if you can. Twelve persons are to secure cash prizes payable on the 1st of January next, that time is not far off. We hope not only to profit ourselves, but also to profit all who will become readers of our paper and competitors for the prizes. We have but two agents, B. S. Hill and J. C. Bartlett, who have any authority to canvass for subscribers, these gentlemen we know to be reliable and trustworthy. It is our intention to dispense as much as possible with the travelling agency system. We therefore offer prizes of sufficient value to induce our readers to canvass for subscribers in districts where they are known and not distrusted. Subscribers can be sent in at any time until January 1st in competition for the prizes. We do not require that they shall all come from one place, we will mail the paper to any address required. Last year John Marston, an industrious mechanic, of Saratoga Springs, secured a prize of \$60 for his efforts in procuring subscribers to this paper, he assured us that he had very little trouble in obtaining them. It should be understood that our local or travelling agents are not allowed to compete for the prizes.

Railroad Accidents—The Remedy.

On the 10th inst. a terrible collision took place on the Camden and Amboy Railroad, New Jersey, between the train from New York and the one from Philadelphia, by which four persons were killed and seven others wounded. On the New York and New Haven Railroad the next morning (11th) the night train came in contact with a mass of rock which had rolled down on the track, by which the engineer was killed and the fireman severely wounded. The Coroner's Jury in the case of the New Jersey collision inquest, was composed of no less than twenty-one persons, sixteen of whom, in our opinion, have returned a morally wrong verdict. The inquest was held at Oldbridge, Middlesex Co., and the substance of the decision is, "that the collision was caused by the gross carelessness of John Anderson, the engineer of the New York train running at an unusual speed by the station and around the curve at Oldbridge. They also found the conductor censurable for omitting to compare his watch with that of the engineer, and the standard clock at the New York station." The Jury exonerated the company from all blame and censure in regard to the said collision. Five of the Jurors refused to sign the verdict, because they thought the company were censurable, and they were right. The evidence went to prove that the accident was caused by a difference of 2½ minutes time in the watches of the engineers and conductors of the two trains. The conductor has the control of running a train, and the engineer is under his orders, and no evidence was presented to prove that the engineer Anderson disobeyed orders. The cause of the accident indirectly was the miserable railroad system which so extensively prevails in our land.—We have been the stern advocates of double tracks, and have frequently called attention to this question. Had this railroad been a double track, would such an accident have occurred? No. Bad must that system of railroad management be, which, as in this case, is the cause of a collision, by a difference of two and a-half minutes in the watches of the different conductors. The State of New Jersey has become infamous by her railroad system, at once the most contemptible and mean in our land, fit only for Fejee Legislators, and Dahomy exactors.

Many new inventions have been brought before the public within the past five years, for the preventing of railroad accidents. No new invention is required to prevent ninety-nine out of every hundred railroad accidents. Double tracks fenced in, no crossings, well laid rails, good bridges, and plenty of steady active guards on the lines, with competent engineers and conductors, will do all that we have asserted for the prevention of accidents. Many of our railroad companies are "penny wise and pound foolish;" by a short sighted economy, "they leap over bundles to gather straws." A single collision by the smash-

ing of two locomotives, will cost about \$20,000—a dead loss—and perhaps five times this amount for the payment of damages to the relatives of the killed and injured. Such accidents as those mentioned we expect, will take place until our railroad system is reformed. The people can do this by legislation, and until they do it, we will hold them culpable.

In connection with the above cases, another melancholy collision took place on the Providence and Worcester Railroad, on the morning of the 12th inst, by which 12 persons were killed, and 25 more or less injured. An excursion train out of time, was met by a regular train, running at a rapid rate, and both trains were dashed together and interlocked. This accident could not have taken place on a double track. Our railroad system is bad, and many of the lines are mismanaged with the most glaring recklessness mixed with gross stupidity. Our people should awake to a true sense of their duty; the remedy for railroad accidents is merely a performance of duty.

Pratt's Steam Boiler Explosion.

MESSRS. EDITORS—On page 368 of the Scientific American (three weeks ago) the decision of the jury in the case of Thomas Reily was published, which decision you characterized as an "outrageous" one—not creditable to coroner or jury. At that time I had read the account of the investigation in the daily papers, and thought you were rather severe in language and not correct in opinion. Since then, Thomas Service, the engineer, has died from injuries he received by the explosion, and having again read over the proceedings of the coroner's investigation in the Reily case, my opinions have undergone a change, and I now believe you were right. With that faculty of detecting error which justly characterizes the Scientific American, your remarks were not too severe—the decision was an "outrageous" one. R. M. Aug. 11th, 1853. A Mechanic.

[Only that our attention has been painfully directed to this case again, by the death of another victim, would I not have added a brief word to the brief remarks referred to by our correspondent.

Murder has stalked and now stalks through our city and land so brazen-faced, in the form of steam boiler explosions, and we have so often in vain directed the attention of lawful authorities, and "the people," to such cases, that we almost consider it labor lost to say a single word when a new case is presented before us; indeed, were it not a matter of duty with us, we would not do it; but, as it is a matter of conscience, we will do our duty "whether men will hear or forbear." The case referred to was one of a very aggravating and melancholy character. A poor man, Thomas Reily, when within but a short distance of his own door in Ridge street, while quietly walking home, smoking his pipe, in the broad blaze of the noon-tide sun, was suddenly struck down upon the pavement by a piece of metal from a boiler which had exploded in another street (Attorney) in Pratt's foundry; his skull was fractured, and in two days afterwards he died in the Hospital. His wife was standing at the door, and saw him coming home; she turned her back to enter, then heard the explosion, looked out, and beheld her poor husband lying insensible on the pavement. The Coroner's Jury, in investigating the cause of his death, hastily decided that some man in Canada was the cause of it,—who the man was they did not know; the Coroner charged them to this effect and so they decided. The direct cause of the explosion was an over-pressure of steam in a miserable boiler, and the man in Canada, as alleged, who built it, had no more to do with the explosion than the shade of Peter Stuyvesant. The owner of the boiler, J. R. Pratt, testified that he bought the boiler for \$400, and that its first cost was \$1,600; had been made in Canada and had been used seven months; it was a locomotive boiler. We have no strictures to make on buying it for such a low price—a man has a right to buy as cheap as he can, but at the same time the boiler was not a good one, as it had to be braced afterwards, and was defective in strength for the pressure it had to carry. Now the

maker of a boiler is not to be held responsible for making a cheap boiler, if he only warrants it to carry a low pressure. Is the maker of a tea-kettle to be held responsible for not making it strong enough, if it bursts to pieces and scalds five or six persons, because its lid was tied down by the person who was using it? Surely not. We therefore believe that the maker of Pratt's boiler, this Mr. Nobody, was not the least to blame for its explosion, but those who were using it. Mr. Pratt bought it cheap, and assumed all the responsibilities of using it, for the safety or danger of those around it.

At the present moment there are hundreds of these powder magazine boilers in our city, to the great danger of the lives of our citizens. There should be boiler inspectors to examine and watch the condition and workings of steam boilers in every city, so as to check unscrupulous men from carrying dangerous high pressure steam in inefficient boilers. Of one thing we are sure, however, if a hundred boiler explosions were to take place in a single day in our city, and a thousand lives sacrificed, nobody would be to blame, if all the Coroner's juries were composed of the same materials, and were guided by the same principles, as the jury in the case of the death of Thomas Reily, by the explosion of "Pratt's Boiler."

Events of the Week.

FRANCE ON THE SCIENTIFIC AMERICAN.—Speaking of the Scientific American the Paris "Invention" says:—

"The excellent illustrated journal of Messrs. Munn & Co., is a vast panorama, exhibiting the wonders of the civilization and industry of North America. We take pleasure in introducing this publication to any who may desire to examine it or to subscribe for it."

[We feel obliged for this polite introduction to the French people. We do intend truly to exhibit the "wonders" of American industrial progress, and they will be shown conspicuously in the fore ground of our panorama. But it is also our ambition faithfully to represent all the most notable events of European industry; indeed, we desire to make our paper merit the title of the panorama of the world's industry.

OCEAN TELEGRAPH.—One of our city dailies in speaking of the proposed ocean telegraph says:—

"The telegraph, now, is not always reliable, but if it comes to telling real fish stories, will not its usefulness be diminished or destroyed? Besides, some fish—like eels, for instance—are said to be charged with electricity. Who knows but they will monopolize the use of the wire? Perhaps some of our so-called scientific journals which claim to possess all the knowledge extant on every subject, will inform us. At all events, they can tell us whether the telegraphic news will be fresh after having passed through so much salt water."

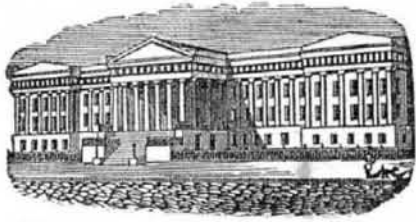
A so-called scientific journal can answer the last question, and can assure the editor that the news will be perfectly fresh when it arrives, as it will not pass through the salt water. The first question being a fishy one, can be answered best by the paper that asked it; its pretence to all knowledge on every subject is boundless. We cannot conceive, however, how it ever entered into the head of the interrogator to ask such a question, for eels charged with electricity are surely beyond the power of monopolizing any more of it.

A FAVORED EDITOR.—A number of the merchants of Glasgow, Scotland, recently presented the editor (Robert Gunn) of the "North British Daily Mail," with a purse containing £390 (\$1,950) in testimony of their appreciation of his ability and enterprize as a journalist.

The San Jacinto.

By the "Washington Star" we learn that this war frigate is to get in new machinery when she arrives. Well this is too bad; our naval steamers, with a very few exceptions, are a disgrace to our country.

The cotton crop in Alabama and Mississippi, as we learn by our southern cotemporaries, will be an early and large one.



Reported Officially for the Scientific American
LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING AUG. 9, 1853

WINNERS OF GRAIN—By Samuel Canby, of Eliott's Mills, Md.: I claim the construction of the receiving and discharging passages for the grain; that is, the passage at the door, passage, I and passage, J, in the manner set forth.

MULTIPLYING GEARING—By Frank Diben & Lewis Bollman, of New York City: We claim the employment in any manner as described, for the purpose of transmitting rotary motion at a multiplied or decreased speed of two pairs of toothed or friction wheels, combined as described, to wit, the said wheels being placed upon two axes, one of which is capable of revolving round the other, one wheel of each pair being on one axis, and the other wheel of each pair being placed upon another axis, as set forth.

[This is a very ingenious invention, and we hope soon to present an engraving of it. See notice on page 236, Vol. 7, Sci. Am.]

LIFE BOATS—By Daniel Dodge, of New York City, and Phineas Burgess, of East Boston, Mass.: We do not claim a boat having an opening extending completely through it, whereby it is rendered, by the addition of a floor, fit for service in opposite positions on the water.

But we claim the central fixed platform, which is secured in the opening of the boat in a plane passing centrally and horizontally, or nearly so, through the same, or which may be said to form a partition between two opposite recesses, as described, the said platform serving as a floor to the boat, whichever side is upwards, and being, from its fixed position, incapable of becoming disarranged by any accident.

[See engraving of this useful improvement in No. 16, this volume.]

SETTING UP TEN PINS AND RETURNING BALLS—By G. W. Bitchell, of New York City: I claim setting up the pins of an alley by an apparatus operated from the head of the table or elsewhere, by means of a weight or weights attached to them by cords when combined with the elevation board which raises and sustains the weight or weights to admit of the pins being knocked down, as described.

I also claim the use at the back end of the table of a delivery board applied and constructed as described, in combination with an elevator for the elevation and return of the balls, as described.

CARPENTER'S CLAMPS—By B. H. Green, of Princeton, N. J.: I claim the combination of the adjustable vibratory arms and reversible jaws, with the adjustable clamp, for the purpose of presenting jaws of different sizes and at different distances from each other, as set forth.

MODE OF DRYING PAPER—By John Hartin, of New York City: I claim drying paper by passing it between opposite series of equal sized fans, which revolve with equal velocities; by which a pressure of air of equal force is made to act simultaneously upon opposite sides of the paper, and thereby insure smooth and uniform surfaces upon the same, as set forth.

RAILROAD CAR SEATS—By Samuel Hickok, of Buffalo, N. Y.: I claim constructing a railroad car seat by connecting and arranging the sliding seat with the reversible back hinged at the extremity of the reversing arms, and combining therewith the double ratchet bars, in such a manner that it can be easily converted in either direction into a day or night seat, and at the same time not occupy more space than the ordinary stationary seat, as set forth.

I also claim the triangular foot rest in combination with the sliding seat, whereby it is made adaptable to the seat when used either as a day or night seat, as set forth.

WINNERS—By L. S. Ingraham, of Cuyahoga Falls, Ohio: I claim the stair or fluted screen, constructed as set forth.

IRON POSTS FOR FENCES—By J. W. Jenkins, of Greenport, N. Y.: I claim the arrow-headed or barbed bottom of the post, in combination with the twisted cross-piece, as set forth.

FIRE ARMS—By George Leonard, of Shrewsbury, Mass.: I claim a revolving fire guide, which, by the continued operation of the fire arm, shall successively communicate fire to the different charges of several barrels.

PRINTING PRESSES—By John Lewis, of Buffalo, N. Y.: I claim the swinging ball and the pressure ball, constructed as set forth.

CORN SHELLERS—By E. L. Millis, of Rochester Depot, Ohio: I claim reducing the larger ears of corn to be shelled to a nearly uniform size with the smaller ones, by passing the whole through between a toothed cylinder and concave, where the large ears are caught and partially reduced or operated upon preparatory to their passing with the smaller ones through between a second cylinder and concave, when the entire operation of shelling and separating takes place, as described.

PRINTING PRESSES—By Joel G. Northrop, of Syracuse, N. Y.: I claim the combination of the series of intermittently rotating platens with a vibrating bed, when so arranged as that the delivery of the printed sheet is from the lower of the series of platens, so that it may drop from the platen on to the paper table, or into a drawer, as described.

FRICTION ROLLERS—By James Patterson, of Franklinville, N. Y.: I claim fitting the bearing of a rolling car wheel on a fixed axle, with a series of friction rollers having bearing of large diameter to run in contact with the wheels, and of smaller diameter to run in contact with the axle, the latter being enlarged at the point of contact with the rollers, as specified.

ROLLING RAILROAD AND OTHER IRON—By A. B. Seymour, of Hudson, N. Y.: I do not wish to limit myself to the modes of application specified; nor do I claim the employment of a series of draw rollers to act in succession on a bar of iron or other metal to draw it into a required form.

But the employment of a series of pairs of rollers, so arranged that the pairs in the series shall be free to move from or towards each other to adapt themselves to the condition of the metal in the process of rolling, as specified.

REPEATING FIRE ARMS—By Joshua Stevens, of Chicopee, Mass. (assignor to the Massachusetts Arms Co.): I claim constructing and combining together, as described, the lock, trigger, and mechanism for rotating and locking and unlocking the chambered cylinder, as that while, by a simple pull of the trigger, the operations of enlocking and rotating the magazine or chambered cylinder, relocking it, and discharging the cock, shall be caused to take place by power applied to the trigger alone, the elevation of the cock, or the cocking of it, shall be previously effected by the hand of a person or means entirely separate from the trigger, as described.

I also claim the combination of the stirrup, the spring bolt, and the lever, as specified.

I also claim the combination of the sectoral plate, made as described, with the spring bolt and slot, the said plate being applied and operated essentially as explained.

I also claim the method set forth, of constructing the lever, viz., of two parts (turning on one common pin) in combination with their confining and adjusting screws, as described.

DESIGN.

STATUE OF DANIEL WEBSTER—By Thomas Ball, (assignor to G. W. Nickols), of Boston, Mass.

American Association for the Advancement of Science.

As we have stated in a previous number, this respectable Association, after a two years' recess, met at Cleveland, Ohio, on the 28th of last month, and continued in session for five days, then adjourned after deciding upon the meeting in the city of Washington, D. C., in May next year. We will now present an abstract of the most practical interesting papers, and finish the same with this volume of the Scientific American.

Prof. Pierce, of Cambridge, Mass., President of the Association organized the meeting and delivered a very neat and appropriate address. He said:—

"We are again met in the service of a high cause; after the unusual interval of two years we have again come together at an appointed rendezvous, to make each other glad with the tidings of truth which we bring from the heavens and the earth, and to reanimate our fainting zeal by the story of the successful search for the philosopher's stone, the true elixir vitæ, the fruit of the tree of knowledge, and the footprints of Him to whom the earth is a footstool.

Gentlemen, we are not convened for a light duty. Our self-imposed task is not an amusing child's play, and we have not accepted tire liberally offered hospitalities of this beautiful city for the enjoyment of a social festival. We have come to give and to receive instruction and inspiration.

Gentlemen, we have come to study our duty as scientific men, and especially as American scientific men. We are to learn the apparent and not very pleasant paradox that America cannot keep pace with Europe in science, except by going ahead of her. The New World must begin to build upon a level above that of the Old World, and it must build from its own materials. This is not asking too much. It is no more than was accomplished by the American Ship and the American Reaping Machine. The Yankee who picked the hardest lock in England, and contrived a lock which all England could not pick, is but a type of American intellect. This was a work of mind, and we have a right to expect equal excellence in higher and more abstract efforts of American genius.

But above all things it is not to be forgotten that the temple of science, by whomsoever built, belongs to no country or clime. It is the World's Temple, and all men are free of communion. Let us not mar its beauty by writing our names upon its walls. The stone which we have inserted is not ours; it is not thine, it is not mine, but it is part of the temple.

Let us not presume to make these walls resound with the bickerings of angry contention for superior distinction, and the foul complaints of mortified vanity. Let us not raise the money-changers' cry of 'mine and thine,' lest the purifier come, and taking the royal jewel into his own possession, thrust us out into the ditch, and turn our fame into infamy.

It has been observed by others not of our own number, that the meetings of the Association have been characterized by a generous appreciation of each other's labors. But mutual admiration is not our only or our most necessary office. Mutual criticism is equally imperative and equally conducive to the best interests of the Association.

We must not permit erroneous statements to pass unchallenged. It is our stern and solemn duty to criticize and expose all

false developments, whether they are intended, or the unintentional results of carelessness or ignorance.

SATURN'S RING.—Prof. Pierce then proceeded to make some remarks on the ring of Saturn, confirmatory of his investigations on this subject, laid before the Association in 1851. The opinion adopted is, that the ring is a fluid. He said he had now the pleasure of confirming the impressions he then held, condemnatory of the theory advanced by La Place. We quote a passage from his remarks at Cincinnati:—

"The author of the '*Mecanique Celeste*' proved that Saturn's Ring, regarded as solid, would not be sustained about the primary, unless it had decided irregularities in its structure. But the observations of Herschel and others have failed to detect any indications of such irregularity, and a laborious series of observations have finally convinced Mr. Bond of the utter impracticability of any important irregularities, and he has, therefore adopted the conclusion that Saturn's Ring is not solid, but fluid. * * * I am now convinced there is no conceivable form of irregularity, and no combination of irregularities, consistent with an actual ring, which would permit the ring to be permanently maintained by the primary if it were solid. Hence it follows, independently of observation, that Saturn's Ring is not solid."

LITHOGRAPHY.—A paper of which the following is an abstract, was read on this subject by Lieut. E. B. Hunt, U. S. N. This art was discovered by Aloys Senefelder, in 1799, only 54 years ago. By the labors of D'Offenbach, DeLasteyrie, Engelmann, Ackerman, Lemerzier, and others, the infant art, in being propagated from Munich, its birth-place, has also been much improved in many of its details, and has had some important extensions of its sphere of usefulness and capacity. DeLasteyrie's autographic printing and Engelmann's printing in colors, were great expansions of Senefelder's invention, while the excellent management of landscape and scenic effects in Ackerman's establishment in London demonstrated a new capacity of the art. Of all artistic inventions none has so eminent a capacity for being abused as Lithography. In thoroughly skillful hands, it has the capacity for producing effects of a high order, and some which are peculiar felicities of this art alone. But that this result may be attained, it is indispensable that labor, care, and skill, and indeed all the elements of any excellent art, should conspire. The artist needs to be such in fact, as well as in name, and the printer must possess appreciation of the subject printed, and a technical mastery of his business, such as is quite too rare, especially among us.

Lithography owes not only its existence but its possibility to the fact that several quarries, in the vicinity of Munich, furnish slabs of a limestone uniform in texture, apparently compact, yet really having a somewhat open grain. Though other localities furnish stones which could be used, the real commerce of lithographic slabs is limited to the Bavarian quarries, especially Poppenheim and Sonnhofel. These furnish stones of ordinary sizes, quite cheaply, so that those new quarries, which are from time to time announced, must encounter a slow market at the start, unless they are able to furnish, in all the requisite perfection, the largest sizes used. The qualities of a good stone are homogeneity, with freedom from veins, specks, and flaws, a yellowish white, or a pearly-gray color which is uniform, a hard, fine, uniform grain, a conchoidal fracture with a good degree of strength, and a capacity for receiving good grained or polished surfaces, and of being uniformly acted on by acids.

Autographic printing is not now much used, though cases frequently occur in which it is very convenient or even important. Special attention, in transfer printing, is to be devoted to the quality of the paper used. The paper has a great effect both on the clearness of the printing and the duration of the transfer.—Transfer printing, even as it is now practiced, must be called eminently useful. Senefelder himself used it, though quite imperfectly, of course; but it is only during the past twenty years that its capacities have been really de-

veloped. The rapid improvement it has experienced makes it almost certain, that before many years more it will have become quite perfect and certain in its results. It is now very far advanced in France, the home of lithographic art and science, as the maps of departments, printed by the Government, fully establish. The plates of the great topographical survey of the interior of France are rearranged by transfer, into excellent maps of the departments, with special borders and titles, and full letter press statistical notes, printed from movable type, and transferred into the proper spaces. In England and Scotland, plate-transfer printing is prosecuted as a business, though with what success I have not the means of knowing. In this country, the great amount of transfer from stone on to stone, in making up checks, bills, labels, &c., supplies many shops with petty jobs in one species of transfer; but a few only are engaged in transferring large steel or copper plates. To do this well requires a man to make plate-transferring his business, and otherwise, not only will he fail of success, he will be apt to seriously injure or detace plates entrusted to his handling. Our principal establishments in which plate-transfer printing is extensively executed are, J. Ackerman's, No. 379 Broadway, N. Y.; D. McLellans, No. 26 Spring street, N. Y.; Wagner & McQuigan's, Franklin-square, Philadelphia; and Duval's, Philadelphia. The plates of the Coast Survey Report have been in part printed by each of these establishments, though sometimes their work has furnished very poor evidence of any skill in managing this process. It was by being for the last two seasons assigned to the charge of inspecting the work on these plates, executed by the two first-named establishments, that I was led to such an acquaintance with the subject as to induce me to make this communication.

(To be Continued.)

Remarkable Discovery in Russia.

M. B. Larsky, the engineer, lately deceased, who had also acquired a reputation as a poet and an archæologist, made a discovery of the greatest importance in White Russia—a discovery brought to light when his papers were examined after his decease. Being occupied in making a road in that province he found it necessary to drain off the waters of a lake into another lake at a lower level, and in the course of the operation he discovered in a forest, several feet below the surface of the soil, a road paved in the antique Roman or Mexican style, with traces of a stone bridge or a peculiar construction. In M. Larsky's opinion 2000 or 3000 years must have elapsed before the face of the country could have been transformed to such an extent as he observed, and if this supposition be well founded this district must have been inhabited before the time of the Scythians by a more civilized nation. M. Larsky's discovery will, doubtless, not pass unnoticed, and may lead to important results.

New Sculling Propeller.

A small boat has recently been constructed at Richmond, Va., which is propelled by a propeller, called the "submerged or scull propeller." The power is applied to the stern of the boat, and operates in the manner of a fish tail waving from side to side, to give the impetus. On each side of the boat there is an upright lever, between which the operator sits, and by working the levers backwards and forwards, the motion is given to the fish-tail and to the boat. The boat is about nine feet long and three wide, and the speed, with one man in it, about four miles an hour.

Potato Rot.

Accounts from various places inform us that the potato rot is very prevalent this year.—We are glad that the wheat crop will make up the deficiency. During the past two years potatoes have been too dear for poor people to purchase.

The city of New Orleans is severely afflicted with yellow fever this summer; no less than 200 have died in one day. The cholera was not half so deadly.

Great fires have recently been raging in the woods of New Brunswick, and Prince Edwards' Island, provinces.