

Scientific American.

NEW YORK, SEPTEMBER 2, 1854.

Subscribers, be sure and get the First Number.

A new volume of the "Scientific American" will commence on the 16th of September, and we hope our readers will be very prompt in renewing their subscriptions. Many delay until the very last moment, and some until the volume has progressed several weeks, and then call for the back numbers without being able to procure them, much to their disappointment.

We always regret to find an old patron of the paper disappointed in this respect; we have noticed it, however, many times, the result of his own neglect. The edition commencing Volume Nine was increased several thousands, and before ten numbers were issued it was exhausted. We intend to start this volume with a number adequate to meet the wants of all, and shall base our calculations upon the number of subscribers who renew their subscription before the volume fairly begins. Those who are engaged in forming clubs will bear in mind that our list of cash premiums is much larger than last year, offering excellent inducements to any who may feel desirous of canvassing for names. Send in your subscriptions early if you wish to secure the numbers from the commencement of the volume, and advise all your friends to do the same.

Another New Rule in the Patent Office.

U. S. Patent Office, Aug. 12, 1854.

Previous to the second examination of any case which has been once rejected, the 7th section of the act of 1836 requires the applicant to renew in substance the oath originally filed with his specification. After thus applying for a second examination, no withdrawal of any part of the fee paid is authorized.

The previous practice of the office having on a recent occasion been seriously questioned, the law has been carefully considered, and there being no reasonable doubt of its having been heretofore departed from in this respect, the change above intimated seems unavoidable.

But the applicant, without renewing his oath or forfeiting his right of withdrawal, may point out any mistake or oversight on the part of the office, which will be cheerfully corrected.

To render this change as gradual and as little inconvenient as possible, this rule will only be held applicable to cases wherein the first rejection shall be made after the promulgation of the foregoing order.

C. MASON,
Comr. Patents.

[The above new rule relates to a question of law, and is very different from a simple form of conducting Patent Office business; it therefore deserves more than common attention from all inventors. Hitherto, the practice of the Patent Office, in re-examining rejected cases, has been very liberal, and this may have led many to give the office more trouble than they should; but on that account, those who have conducted business with the Patent Office in a correct and honorable manner, should not be made to suffer. It is our opinion that the new rule is contrary to the plain letter of the law, and if an appeal were taken from the decision made upon it, we believe it would be decided against the Patent Office. The section referred to in the Commissioner's letter, says, "In every such case if the applicant elect to withdraw his application, relinquishing his claim to the model, he shall be entitled to receive back twenty dollars." The re-examination of any application is a question of privilege with the Patent Office, and even if it should examine an application fifty times, the applicant, if he withdraw his application, is entitled to receive back twenty dollars. There is no authority, not even a hint, in the whole patent code for the Patent Office charging twenty dollars for an examining fee; this is the key to the meaning of the law in judging of the new rule, which is claimed to be the law. The fact is, the law is positive against it, as it makes special provision for the fee of ten dollars only, for examining an application for a patent, and no provision whatever is made

for charging for a re-examination. This is our opinion of the law, and we entertain no small amount of confidence in its correctness.

Car Ventilation.

Traveling in the ordinary rail cars at this season, under a burning heat, and when all nature is parched up, is one of the greatest nuisances imaginable. No one pretends to travel merely for the pleasure of it, consequently passengers rush from the hot and uncomfortable cars, when they stop, like half-smothered sheep through a gap in a wall.—After a half-day's ride on a railroad, one feels like submitting to the usages of a Turkish bath as the only hope for future cleanliness. If there were any excuse for such treatment of passengers, we might feel willing to submit to it with perfect composure, but genius has supplied the remedy, and railroad companies are maltreating their patrons in not adopting it. We have special reference to Waterbury's improvement, which has been introduced upon the Naugatuck R. R., now under the able superintendence of W. D. Bishop, Esq., of Bridgeport, Conn.

This invention consists in inclosing the whole of a train of cars except at the ends, and taking in at the front a current of pure air, which circulates freely through all the cars, and passes out at the end of the rear one. On each side of the tender, air, free from dust, smoke, and sparks, is caught in an open-mouthed conduit, and conducted into one channel of less specific area, and directed at the front end into the train. This creates a current by the velocity of the train through the atmosphere, which freely circulates through the whole train while it is in motion. Between every pair of cars the usual space is inclosed in an elastic trunk formed of two sections—one for each car, which fit close against one another when the cars are coupled, so that the whole central way through a train of cars becomes a long continuous hall. Passengers pass in and out of each car at a side door near the end. It will thus be seen that safety as well as comfort is obtained by the use of this invention, as there is no danger of falling between the cars or from the platform. The whole train is thus converted into a box, into which neither dust, smoke, nor sparks can enter. When the train stops, the windows may be thrown open, so as to admit air when the main current is stopped; these are closed when the train begins to move. This plan of car ventilation is very simple; its merits consist in excluding those great draw-backs to comfortable railroad traveling in our country, viz.—dust, sparks, and smoke. We understand the New York and New Haven Railroad have purchased the right to use the invention for a reasonable sum, and that it will soon be applied on all their cars. We hope that every railroad in our country will adopt this invention or some other (if it can be obtained) equally efficient, for it is our opinion that railroads should now pay premiums to passengers, instead of exacting fares from them for spoiling their clothes and charging their lungs with dust, when they are necessitated to travel.

Spiritual Manifestations and Discoveries.

We live in a professedly civilized age; knowledge is increased, and the lights of science and philosophy are shed around the footsteps of high and low in all places. Yet with all our claims to superior enlightenment, that faculty of man and woman, *curiosity*, is made the subject of as gross deception now, as it was when kings kept astrologers and soothsayers to direct them when to go up to battle, to make new laws, and to read their dreams. It is not in the sequestered outskirts of civilization that imposture stalks and plans to devour its victims, and to deceive the simple. No, in the midst of our crowded cities, and in our most public marts, the wily deceiver spins his thread and weaves his web. In traveling up Broadway, the great luminary of New York streets, you can see in one place the words inscribed in bold letters, "Spiritual Manifestations conducted here by a Medium, entrance 25 cents." A few doors further on another sign tells you that table tipplings and rappings are manifestations and communications of spirits with another

medium—a female. (It is somewhat singular that nearly all these mediums are of the gentler sex.) Now as we have always had an idea that a spiritual existence was one of a higher state of intelligence, we cannot but conceive that such spirits as those which are said to manifest themselves here, have a very ignorant and poor opinion of their good names, thus to be rapping on and tipping over tables for 25 cents per head.

The most sensible thing that ever we heard of one of these spirits doing was that of Benj. Franklin's inspiring a medium to construct a new shingle machine. As chronicled by a spiritual paper it was said "to work to a charm, and that measures had been taken to secure a patent." Now the last part of the account of this machine was something which the ignorant medium should rather have consulted us about than his exhibitors. Every inventor who applies for a patent must make oath that he is the original and first inventor: now as Benj. Franklin's spirit communicated the plan of making that shingle machine, we think it will be a pretty hard job for the medium to make oath that *he* is the original and first inventor.

Great Place for Steamships.

The last number of the London "Artisan," presents three long columns containing the lists of the number of steamships and sailing vessels which have been built and are now building on the river Clyde, in Scotland, since March, 1853. In adding up the columns of figures, we find the total number of vessels to be 265, of which 87 were sailing vessels, and all the rest (178) steamers. Of this large number only 31 are built of wood, all the rest (234) are of iron. Of the steamers, only 47 were built with paddle wheels, 131 being screw propellers. The total horse power of the engines, as given, amounts to 26,396. This we know is far below the mark, as we perceive that one wood-built paddle steamer by Robert Napier, of 3600 tons burthen, is set down with 1000 horse power engines, this can mean only one of its engines. Another by Wingate & Co. of 1000 tons burthen, is set down at 200 horse power, which can only be for one engine. In the list as published by the "Artisan," only the horse power of one engine in a vessel, we conceive, is given, and we are thus led to infer that the total horse power of the engines for these steamers, is nearer 40,000 than 26,000. The total tonnage of all these vessels amounts to 166,804 tons or 166,804 + 265 = 629 tons for each of the two hundred and sixty-five vessels. The river Clyde, or that part of it on which these vessels have been or are building, is in length twenty miles—from Greenock to Glasgow. We had no idea that in any place in this world, embracing such a small extent of territory, so many vessels were built, especially steamers. That country appears to be the steamship shop of the world. These vessels have been built for parties in almost every nation under the sun—Ireland, England, Australia, Sicily, France, Egypt, &c. The whole country contains only 2,800,000 inhabitants, and these vessels were built or are building in only one district—but that by far the most important of it.

Government Steamers—The "San Jacinto."

We hope the four new government steam frigates which are to be built, according to the bill passed at the last session of Congress, will not make us ashamed of our country with respect to the way things have hitherto been managed in the Navy Department. Our readers will remember our famous steam frigate "San Jacinto" for its desperate performances have been described more than once in our columns; we learn that this famous steamer has made another trip after her late overhauling and thorough repairs in machinery, and with such success that it had to put into Boston crippled. Her bed-plate was broken, and, as a consequence, her machinery may have to be taken out, in order to get in a new one. If we are not much mistaken, this steam frigate has already had two new sets of machinery, and she is but yet in her trial trips, having done no service worth naming. Is not this a shame? It is. Engineers of the Navy, take care of the new steam

frigates. Your reputation is at stake in their construction. You have much to lose if they prove unsuccessful.

Reaping and Mowing Machines.

In No. 1 of the next Volume of the "Scientific American," we shall commence a series of articles upon reaping and mowing machines. It is our intention to make it a subject of great interest to our readers, and to accomplish this we shall publish illustrations of as many improvements in this branch of the arts as we can possibly collect. We have already collected much valuable matter, and with a view to a complete elaboration of this subject we made a call, some time since, upon all patentees of reaping and mowing machines, to send us their Letters Patent and we would publish their machines free of expense to them. No patentee interested in this class of improvement should delay sending us his Letters Patent to enable us in bringing his invention before the numerous readers of the "Scientific American." It will certainly be for his interest to do so, and we shall regard it as a great favor. Patents can be forwarded at our expense, either by mail or express, and as soon as we get through with them they will be promptly returned.

Our Prizes.

We hope our readers will remember the prizes we have offered; they are free to all, and may be of no small benefit to those who obtain them. Now is the time to begin laboring. Mechanics can canvass for subscribers during spare moments at meal hours, or for an hour or two in the evening. Among shop-mates and acquaintances such extra efforts are worth putting forth. It is not every day that such prizes are offered, and for which any person can enter as a candidate.

Photography.

The London "Mechanics Magazine" tells of two photographs which were recently exhibited at the Polytechnic Institution of that city, which exemplified, in a striking manner, recent improvements which have been made in photography. One picture was a portrait, the full size of life, and the other was a copy of the front sheet of the "Times," on a surface of two to three inches. Both pictures were very perfect; the small one from its distinct and clear lines, could be read without the use of a magnifying glass. In this city, at No. 349 Broadway, (Gurney's) there are on exhibition a number of life size photographic pictures, which we are certain, cannot be surpassed by those in London. The figures look out from their frames, as if they were living and breathing before you. The art really appears to have arrived at such perfection as to supersede the occupation of the portrait painter altogether. Who a few years ago, would not have been considered beside himself if he had asserted that in 1854, artists would be using the sun for a pencil, to perpetuate on the canvas the likenesses of the fair, the grave, and gay, but so it is.—We live in an age of wonderful achievements in science and art.

Battle, murder, sudden death, dry weather, and tightness in the money market, seem to be the ruling features of the day.

\$ 570 IN PRIZES

The Publishers of the "Scientific American" offer the following Cash Prizes for the fourteen largest lists of subscribers sent in by the 1st of January, 1855.

\$100 will be given for the largest list,	
\$75 for the 2nd,	\$35 for the 8th,
65 for the 3rd,	30 for the 9th,
55 for the 4th,	25 for the 10th,
50 for the 5th,	20 for the 11th,
45 for the 6th,	15 for the 12th,
40 for the 7th,	10 for the 13th,
	and \$5 for the 14th.

The cash will be paid to the order of each successful competitor; and the name, residence and number of Subscribers sent by each will be published in the "Scientific American," in the first number that issues after the 1st of January, so as to avoid mistakes.

Subscriptions can be sent at any time and from any post town. A register will be kept of the number as received, duly credited to the person sending them.

See new prospectus on the last page.