Scientific American

NEW YORK, JULY 5, 1851.

The Republican and Royal Mail Lines of Atlantic Steamships.

By reference to our record of the passages made from Liverpool to New York, during the the last quarter, by the Collins and Cunard Lines of steamships, we are enabled to form a very correct estimate of the relative speed of both lines, and of different vessels in them, by taking the four steamers which made two voyages each in the quarter, viz., the Pacific and Arctic, the Asia and Africa. The two passages of the Pacific occupied 19 days, 23½ hours, average 9 days 23¾ hours. The two passages of the Asia occupied 21 days 8½ hours—average 10 days, 16¼ hours. The two passages of the Artic occuped 21 days 23 hours—average 10 days, 23½ hours. The two passages of the Africa occupied 22 days, 12 hours,—average 11 days 6 hours. These figures are not mere verbose opinions, they are facts, and as Burns says "plain facts are sturdy things which cannot be refuted."

It will be observed that the Pacific and Asia have made the best passages, and by comparing the performances of these two noble vessels, we find the Asia has been beaten by the Pacific 1 day and 19 hours in the two passages. By comparing the voyages of the Artic and Africa, we find the latter to be beaten by the former 13 hours in the two passages. The Pacific made each voyage in 21½ hours less than her opponent; the Arctic in 6½ hours less than hers. The fastest of the Cunard line beat the Arctic 14½ hours in the two voyages, the fastest of the Collins line beat the Africa 2 days 18½ hours in the two voyages.

There is one cheering fact elicited by our record, we allude to the increased speed of Atlantic steamers—the shortening of the duration of voyages. The average duration of the eight voyages of which we have been making comparisons, is 10 days, 17 hours, 22 minutes. Within two years a steam voyage across the Atlantic, has been shortened nearly three days. The increase speed has been about 20 per cent. Some time ago, we predicted that in 20 years from 1851, passages would be made across the Atlantic in seven days. We hope to live to see our reasonable anticipations accomplished.

The increase of speed in these ocean steamers is not attributable to any new principle in the construction of the engines—they have all the old fashioned side levers. The increase of the size of the vessels, and improvements in their form, together with superior management, are the principal causes of the superior results. We will yet see vessels of four and five thousand tons burden navigating the ocean, and in proportion to their tonnage they will meet with less resistance than smaller ones, consequently they will make faster voyages. Below a certain size it is impossible for a steamship to navigate the Atlantic successfully, while the advantages increase with the tonnage, all other things being equal. No doubt there is a line of demarcation, beyond which advantage would cease, but we have not yet reached that line, nor do we truly know how far or near we are to it, experience alone can teach us.

Five peculiar steamships for the California trade have recently been constructed. They are hybrids, having sea hulls and river boat engines—top levers. Two of them, the Prometheus and North America, have made remarkable passages. The latter was to have gone to Ireland, but for some reason did not, for which we are sorry. We should like to see such kind of vessels fairly tested on the stormy Atlantic. The engines are more simple than the side levers, and if they will stand the storms of the Atlantic as well, they are preferable.

Another kind of engine has many advocates, viz., the oscillating kind. Two oscillating engines with cylinders of 85 inches in diameter are now building at the Novelty Works and a pair of equal size at the Allaire Works for the steamers belonging to Howland & Aspinwall, and destined to run between San Francisco and Canton, in China. Out of these different kinds of steamships, valuable improvements may be expected, but experience will decide. These things cannot be determined by speculation, but the desire to improve, and the determination to excel, cannot reasonably fail to produce superior results.

Business at the Patent Office.

It is an outrageous shame that applications for patents are suffered to linger in the dusty pigeon holes of the Patent Office 4, 5, and 6 months before any action is had upon them. Inventors, in many instances, who are subjected to this delay, often, we have no doubt, suffer in their interests very much. We know it is seriously aggravating to their feelings and many times they utter imprecations against the Commissioner and Examiners, which to say the least are unchristian-like and hence the office by such delay, if they do nothing more, increase the quantity of sinners, something that we should not like to be guilty of. In mitigation, however, we can justly assert that the Commissioner is not altogether chargeable with the fault, for hitherto the examining force of the office has been about one half that actually required by the present and prospective wants of the office. Recently, however, four assistant Examiners have been added to the corps of the office, but what are we to expect from their labors if, as the *Herald* says, one of them is a mere boy of 19 years of age? What confidence can we have in the decisions and opinions of a mere youth, who necessarily cannot have gained any considerable amount of practical information especially upon the Arts and Sciences? We recently had an evidence of some of this children's play (although we are not certain it did not emanate from one whose head is generously sprinkled with some of the evidences of decay). In a note accompanying a returned specification to this office, the Examiner, says, "This screw nut will not work in the model where it must do, as it is made a part of the claim and there is no nut whatever." In the first place there is no sense in the sentence, and in the next place, if there was no nut attached to the model, it is a query to us how the Examiner could have tried to work it, as is inferred he did from the first clause of the sentence. We might instance other rich morceaux which emanate from some old growling Examiner, who finds fault with every thing not prepared strictly according his own notions. The Examiners of the Patent Office, although many of them are high minded and honorable, are yet evidently a long way behind the age—specimens of learned dullness, and it seems to be a pity that the soapsuds of prescription fail to cleanse and renovate some of the apartments in this, one of the most important bureaus in the country. The decisions of the office in some instances are marked with a peculiar imbecility, and the moment you undertake to reverse them, a spirit of rancorous hostility commences—and it seems almost impossible to touch the tender cords, or cause a solitary humane vibration. Honied words and sugar plums are gall and aloes. If you undertake to reach them by copying the argument from the most learned men of the age, a new and antagonistic theory comes forward as a rebutter. The sages and philosophers of this department have seldom, if ever, found their equals, but the credit does not seem to reach us.

We throw out these random shots for the purpose of eliciting attention to the interests of American inventors, whose money supports the office. It is unjust—yea, cruel, to keep them suspended between hope and fear for so long a time. A farther increase of the examining force is loudly demanded, unless this shameful evil can be remedied. We hope these suggestions will do good. They are true whether they do or not.

Boston Steamships.

In a quiet but very unexpected way, it was announced a short time ago that a steam propeller ship was launched at Philadelphia for the Boston and Liverpool new line, and would be ready to commence her trips on the 10th of this month. Three more vessels, we hear, are to be constructed after the propeller model of Capt. Richard F. Loper's latest improvement. They are to be fitted up with accommodations for 150 cabin passengers each, and some berths (450) for steerage passengers. The people of Boston are now about to engage energetically in steamships, and it will be a very strange thing if they are not eminently successful.

Paving Streets.---Mud and Dust of London and New York.

"The 300,000 houses of London," says the London Quarterly Review, "are interspersed by a street surface, averaging about 44 square yards per house, and therefore measuring collectively about 13¼ million square yards, of which a large proportion is paved with granite. Upwards of two hundred thousand pairs of wheels, aided by a considerably larger number of iron-shod horses' feet, are constantly grinding this granite to powder; which powder is mixed with from 2 to 10 cartloads of horse-droppings per mile of street per diem, besides an unknown quantity of the sooty deposits discharged from half a million of smoking chimneys. In wet weather these several materials are beaten up into the thin, black, gruel-like compound, known as London mud; of which the watery and gaseous parts evaporate, during sun-shine, into the air we breathe, while the solid particles dry into a subtle dust, whirled up in clouds by the wind and the horses' feet. These dust clouds are deposited on our rooms and furniture; on our skins, our lips, and on the air tubes of our lungs. The close stable-like smell and flavor of the London air, the rapid soiling of our hands, our linen, and the hangings of our rooms, bear ample witness to the reality of this evil; of which every London citizen may find further and more significant indication in the dark hue of the particles deposited by the dust-laden air in its passage through the nasal respiratory channels. To state this matter plainly, and without mincing words—there is not at this moment a man in London, however scrupulously cleanly, nor a woman, however sensitively delicate, whose skin and clothes and nostrils, are not of necessity more or less loaded with a compound of powdered granite, soot, and a still more nauseous substance. The particles which to-day fly in clouds before the scavenger's broom, fly in clouds before the parlor maid's brush, and next day darken the water in our toilet-basins, or are wrung by the laundress from our calico and cambric."

Of New York we cannot say anything less. We can brag of as much dust and as sharp stuff here as any of the Cockneys. We have less moisture to be sure, and less mud, but leaving smoke out of the question, we can make the dust fly in clouds, if not equally black, at least as portentous, as those of London.

The great cause of dust in our city, is repairs of streets. Our streets are paved without skill, with an intention to endure the shortest possible period, and when not a single inch of sand should be left on the top, when all should at once be swept up clean, about three inches of sand are left on top of all repaired pavements, spoiling the goods of our merchants, and raising clouds of dust to render every pedestrian as uncomfortable as possible. Why don't our street inspectors look to this, and why don't our merchants demand a reform? There is no need of using one sixth of the sand that is used. Every extra cart of sand laid down to repair our streets spoils $50 worth of goods, but there is a scheme behind the sand, as the pavers are paid for the quantity which they use.

Byram's American Clocks.

It is not a very uncommon thing for rich people and rich churches in our country to send to England for their clocks—fine clocks. They think that good clocks cannot be made at home. This is all a mistake, and a very great one. "Far off birds have feathers fair," is an old saying, but if our churches knew what fine clocks are made at Sag Harbor, L. I., N. Y., they surely would never send abroad for them. At the Oakland Works, Sag Harbor, Messrs. Sherry & Byram, there are made by Mr. Byram some of the finest clocks in the world. A clock was put up in the Methodist Episcopal church, Sag Harbor, six years ago, and it never varied three minutes in a year. Some of Byram's clocks have chronometer regulators and are as good as any that can be made. There are many who seem willing to pay more for a foreign clock than for one made at home, forgetting that if they would pay the extra, the clock can be made at home as well as elsewhere. What is it that makes the difference in the price of articles but the workmanship? Nothing; then we say, pay a sufficient price for whatever is good at home, and do not be unreasonable about such things.

Phillips' Fire Annihilator.

This apparatus, which is making not a little stir at the present moment, we perceive, by looking over the back volumes of our foreign London papers, was made the subject of lectures in the Royal Polytechnic Institution, London, by Dr. Ryan, in 1845. It is now six years old. In many public trials which have been made with it in London it failed to give satisfactory results. At the time Dr. Ryan lectured, it was advertised as "A new subject in chemistry of much interest—Phillips' Patent Fire Annihilator." It is no argument against the value or merits of an invention that it is "some years old." Many very excellent inventions have taken a long time to win their way into public favor and come into general use; this was the case with Watt's great improvements in the steam engine; it was the case with the steamboat and locomotive. This "Fire Annihilator," however, is nothing more than the employment of carbonic acid gas to put out the flame. It will do well if applied early, when the fire is but small; but what fire has taken place which might not at one time have been extinguished with a gallon of water? Water is the only sure and cheap "Fire Annihilator."

The Potato Rot.

A Mr. Flanders, who has dovoted much attention to this disease and to its causes, informs us that the insects which he is fully satisfied produce the mischief, have already made their appearance in great numbers. He recommends the immediate application of lime to all who would save their potato crop.

New Rotary Cylindrical Engine.

Mr. S. Furman, of Romulus, Seneca Co., N. Y., has applied for a patent for a novel feature in the steam engine. The cylinder is hung so as to rotate by the pressure of rollers attached to the piston rod acting against a fixed curved way, so formed as to guide and direct the cylinder round about to rotate it. One or two piston rods may be used; if two, they are attached at antipodes to the one piston, and work through stuffing boxes on both ends of the cylinder.

Improved Gate.

Mr. Ashley Hotchkins, of Schenevus, Otsego Co., New York, has invented a very excellent improvement in gates, whereby in a simple manner, a gate will swing open both ways, according to the direction in which it is swung. It combined also the self closing principle along with its quality of swinging both ways, thus making it one of the most desirable of gates and a great improvement. Measures have been taken to secure a patent.

American Flour.

We see it stated in some papers that the character of American flour is suffering in the foreign markets, that it cannot be sold for $4 less per barrel than the Trieste kind. Will our friend the "American Miller tell why?"

Improvement in Treating Pototoes.

A patent has been taken out in London for preparing potatoes for seed, by scooping out the eyes with a very small portion of the potato by a gouge, and then dusting over the eyes or germs with powdered charcoal. It is stated that the germs thus treated answer the purpose as well as whole potatoes, and can thus be conveniently sent in barrels to any distance. This is a subject worthy of the attention of our farmers.

It is stated that the American wheat was ground too close, and was of a bad color.