

miles per hour with full loads on the river Shannon, which expands into large lakes a few miles above where the Grand Canal intersects it. The engines work at high pressure, nominal power, twelve horsepower, capable of working with ease to seventy-five. If our enterprising neighbors had their eyes open, they would discover all this without the elaborate and unsatisfactory trials they have made, as detailed in the following paragraph:—

"The commission authorized by the act of the State Legislature of New York to award a prize for the best mode of steam propulsion, has submitted a report which contains some interesting details of the experiments made. Three boats only made the three round trips required by the Act, and though several others made the attempt they fell short but a little. The jealousy and indisposition to give the right of way to the steamers, on the part of the horse boatmen and lock tenders, caused delays of from one day to two and a half on each trip. The blockade of horse boats laid up during the epizootic, and the insufficient depth of water, also caused serious hindrances on the experimental trips; but in spite of the delays, the time made by the steamboats was from 2 68 to 3 32 miles per hour, and the trip from Buffalo to Troy was brought in side of seven days, one boat making it on an average in five days and six hours when loaded. A saving from 20 to 25 per cent. is also found in favor of steam, with a prospect of increasing this percentage in actual service. This shows that the use of boats propelled by steam, on the trunk canals, is entirely feasible, and with the adoption of a better system of locks, the days of horse boats will be numbered.—*Boston Globe*.

The following paragraph from a Western exchange is worthy of attention, especially as Canada possesses the largest pine forests in the world; and at the rate they are being manufactured into lumber, in a few years vast areas will be denuded and barren which a little care might make productive of a valuable material for domestic use.

"The great increase in the price of pine lumber for the last few years and the growing scarcity of the pine forests, as they never sprout again under ordinary circumstances, leads to inquire if there is no practical way of avoiding the coming scarcity. We are already told that within five years. Williamsport, the great Pennsylvania lumber market, will, as such, be no more. The pine forests will all have been cut down and sawed into lumber. It has occurred to me that a fact which accidentally came to my notice might be of use to you.

A party of hunters from Morristown, while on an excursion to Pike Co. Pa., a few weeks ago, were telling me the history of their exploits, and among other things one of them, a worker of wood, mentioned the fact that in all instances where pine forests had been cut down and tilled, if but once, a new growth of pines immediately sprang up, and in the ordinary course of time forests of pine equal to the old original growth covered the ground. Now, if the pine forests can all be renewed by once blowing, it seems to me a thing which should be generally known and recommended. If you desire, I can ascertain the

names of parties in Pike County, who personally will vouch for these facts.—MORRISTOWN.

The following paragraph from *Broad Arrow* describing the launch of a most useful class of vessels, and of a description to be particularly adapted to our rivers and lakes. It is not stated whether they are adapted for the application of sail power, but as they carry only four days coal, it is evident they must depend on some other motive power for cruising or operations extending over a longer period.

In order to adapt these vessels to the lake service, they should have greater coal capacity, an additional 100 tons of stowage would not very materially add to the size or draught of the vessels which should in no case exceed six feet, it might be found by adding five feet to length and the same to beam. But the disposition would prevent their use on two of our most important canals. The Champlain with locks of 133x30x5, and the Rideau Canal of 130x33x5—so that it were better to construct vessels of a larger size for lake service, and leave those for the use of the canals.

The St. Lawrence and Welland Canal (will when completed) be equal to the admission of vessels of 180 feet keel, 35 feet beam, and eight feet draught, which would give vessels of nearly 500 tons as about the size required for our Lake fleet. An increase in the number of this class of vessels is very desirable, because without them the larger vessels of the British fleet would be totally useless in coast operations.

It is a matter for doubt as to whether the bilge keels will be a good substitute under sail, for the keel proper. And we could prefer having the vessels fitted out as twin screw propellers, principally for the facility of turning. The greatest drawbacks however, are the small capacity for coal stowage, because it limits their operations altogether.

"There was a double launch at Chatham Dockyard on Tuesday (11th February) the vessels being the *Ariel* and the *Zephyr*. Both are built upon what is known as the composite principle, and are of the *Coquette* class, the only difference in those vessels being that they are only supplied with an iron keel plate; and have no keel, and are consequently flat bottomed, but to make up for this they are provided with two "bilge keels." The dimensions of the vessels are—length 125ft.; breadth 23ft.; depth 12ft.; tonnage, 307. It was originally intended that the tonnage should have been 295, but some alterations made in the beams of the vessels after they had been commenced allowed for the additional tonnage. The framework of the vessel is of angle iron, 3in by 3½ in. and about 2 of an inch in thickness. The frames are about 1 foot 8 in. apart. There is no skin of iron plates, but only two thicknesses of wood, 3in. and 2in. respectively, both laid horizontally. Each vessel will carry two 64-pounder rifle guns and two 20 pounders, and it is expected that they will become very useful, for while carrying these

guns their draught of water is but small, which will enable them to operate successfully up shallow rivers. They are fitted with compound engines of 90 horse power (nominal); they have been supplied by Messrs. Humphrys, Tennant, and Co., of Deptford, and are expected to indicate 360 horse power on trial. The vessels will carry about four days' consumption of coal. They are also fitted with one of Griffith's screws each. At the launch few persons were present. The *Zephyr* was the first to leave the stocks, and was "christened" by Miss Galloway, daughter of the Commandant of the School of Military Engineering; the *Ariel* being christened by Miss Hickman, daughter of Colonel Hickman, commanding the General Depot Battalion. The *Rifleman* attained a speed of about eleven knots on her last trial trip, and has returned to Chatham.—*Broad Arrow*.

On Wednesday evening (12th inst.) His Excellency the Governor General Earl Dufferin, and Countess Dufferin held a Drawing room in the Senate Chamber, at 9 p. m. A guard of honor of the Governor General's Guards, with the band of that splendid regiment was in attendance. The presentations numbered over six hundred.

His Excellency was attended by Lieut. Col. Fletcher, Scots Fusilier Guards. Military Secretary; Lieuts. Coulson and Hamilton, aide-de camps; Mr. Patterson, private Secretary, and the following staff.

Colonel P. Robertson Ross, Adjutant General of the Canadian Army; Lieut. Col. Powell, Deputy Adjutant General at head quarters. Lieut. Col. Stuart, Assistant Adjutant General; Lieut. Col. Macpherson, Lieut. Col. Jackson, Acting D. A. G.; Lieut. Col. Aumond; Lieut. Col. Forest; Lieut. Col. Ross, Governor General's Guards; Lieut. Col. Wilson; Lieut. Col. Brunel; Lieut. Colonel Coffin; Lieutenant Colonel Wiley; Major Wickstead, Guards; Major Smith, Brigade Major; Major D. A. McDonald, Major White, Governor General's Guards; Captain Cluff; Capt. Eagleson; Capt. Perry Militia Staff, and the officers of the Guards.

The Senate Chamber presented a very beautiful appearance, with the benches filled by the fashion and beauty of the city. Her Excellency's suite was composed of Lady Harriet Fletcher; Miss Hamilton, Quebec; Lady Macdonald; Mrs. Tilley, and other ladies of rank. There was a large muster of Senators, and Ministers of the Crown, headed by Sir John A. Macdonald K. C. B., and the Hon. Mr. Tilley, the Ministers, with one exception being in Windsor uniform. A large number of members of the Commons were present on the occasion.

This, the first Drawing Room held by their Excellencies was a very great success. The Earl and Countess Dufferin have done a great deal to impart tone to society at the capital, and have dispensed their hospitalities with princely liberality, well becoming the representatives of the Majesty of