under water, both strengtheneth the ship, and though her sides bee shot through, keepeth it from bilgeing by shott and giveth easier means to find and stop the leakes.

"2. In carrying their orlopes whole flo-red throughout from the end to end, without fall or cutting off the waiste, which only to make fair cabins hath decayed many ships.

"2. In laying the second orlope at such convenient height that the portes may beare out the whole fire of ordnance in all seas and weathers.

"4. In placing the cook-rooms in the forecastle, as other war ships does because being in the mid-ships, and in the hold, the smoake and heate soe searche out every corner and seam, that they make the oakum spew out and the ships leaky and soone decay; besides, the roome for stowage of victualling is thereby so taken up. that transporters may be hired for every voyage of any time; and which is worst, when all the weight must be cast before and abaft, and the ships are left empty and light in the midst, it makes them apt to away in the back, as the Garland and divers others have done."

The reports and regulations of these commissioners did much to improve the British navy, although the expenses incurred therein were ostensibly the means, in part, in causing the subsequent revolution. The formation of the famous East India Company, which was the act of James I., for the purpose of driving the Dutch monopoly of that advantageous trade out of existence, aroused the nation, and was followed by the construction of the largest English commercial ship hitherto built in Britain. She is reported to have been of the burden of 1,200 tons, or less in size than hundreds of our packet-ships at the present day. The king dined on board, and named her the Trade's Increase. This was about the commencement of the seventeenth century, and prior to 1605. Nor did the royal impetus rest here. The foundation of the "Shipwright's Company," in the year 1605, which was incorporated by a charter granted to the "Master Warden and Commonalty of the Art or mystery of Shipwrights," in the year 1612, took place in this reign. Mr. Phineas Pett was the first master. The draughts for the ships of the royal navy where subsequently ordered to be submitted to this Company for approval previously to being built from. They also had jurisdiction over all builders, whether of the royal navy or of merchant shipping.

In 1610, the Royal Prince was launched, being the largest and finest specimen of naval architecture ever built in England at this date. The great overhang of bow, a remmant of the old galley of former ages, was discontinued, and the stern and quarters were vastly modernized. She is thus described in Stowe's Chronicles: "A most goodly ship for warre, the keel whereof was 114 feet in length [the length of a 250 ton schooner of the present day] and the cross-beam was 44 feet in length [nearly the width of Collins' steamers.] She will carry 64 pieces of ordnance, and if is of the burden of 1,400 tons. The great work-master in building this ship was Master Phineas Pett, gentleman, some time Master of Arts at Emanuel College Cambridge." The same builder continued the principal engineer of the navy during the reign of Charles. The family of the Petts were the great instruments in modernizing the British navy, by divesting it of the cumbrous top-hamper entailed upon naval ships from the castellated defences found necessary before the use of cannon; and it is probable but that for the taste for the gorgeaus decorations of the times, this ingenious family would have done far more in the march of progress. As it was, they decidedly rendered England pre-eminently the school for ship-building during the time they constructed its fleets. This family can be traced as principal engineers or the navy from about the middle of the fifteenth century to the end of the reign of William III. Nowonder British naval architecture has been stigmatized as a hereditary science, in which errors have been cherished as family heir-looms from generation to generation. Peter Pett, a son of Phineas Pett, was the inventor of the frigate, and caused the fact to be recorded on his tomb. This description of war-vessel gave exceeding advantage to the naval prowess of England. The first was called the Constant Warwick, built in 1646, "for a trial of making a vessel that should sail swiftly,"—in other words, the first armed "clipper." She was built with low decks, the guns lying near the water, and was so light and swift of sailing, that during the Dutch war she took as much money from privateers as would have laden her. Her dimensions are given as follows: Length of the keel, 85 feet; breadth, 26 feet 5 inches; depth. 13 feet 2 inches; and 315 tons burden. Her "highest number of guns 32, and 240 men."

In 1637 he also built the Sovereign of the Seas, the first three-decker built in England. Her length over all is stated to have been 232 feet, her length of keel 128 feet, her main breadth 48 feet, and her tonnage 1,637 tons, being the same as the Anno Domini of her construction. She carried about 140 guns of various sizes. She was at length razeed one deck, and remained in the service with the character of the best man-of war in the world, until she was accidentally burned in 1696.

In 1650 appeared the first work upon naval improvement ever written in England, by no less celebrated an author than Sir W Raleigh. He published two disconrses concerning naval affairs, which had great influence in creating an interest in ship-building about his period. The models of ships were vastly improved, and the arrangement of topmasts so that the ship might be relieved of the weight of spars and rigging aloft when occasion demanded, was devised, together with the invention of the chain-pump, which threw twice as much water as the ordinary kind. The weighing of anchors by the capstan, and the consideration of the length of cables required to ride out storms in safety, also was new, The second deck was raised, to give more vent to ordnance, and stanchions were secured under the beams of the decks, for their support. Longer floors were given to ships and more buoyancy added at the extremities. Improvements were also made in the arrangement of sails.

Studding-sails, top-sails' topgallant-sails, add sprit-sails were divided. Walter writes: "To say the truth, a miserable shame and dishonor it were for our shipwrights if if did they not exceed all other in the setting up of our royal ships, the errors of other nations being far more excusable than ours. For the Kings of England have for many years been at the charge to build and furnish a navy of powerful ships for their own defence, and for the wars only. Whereas the French, the Spaniards, the Portugals, and the Holianders (till of late) have had no proper fleet belonging ts their princes or states. Only the Venetians for a long time have maintained their arsenal of galleyes, and the kinrs of Denmark and Sweden have had good ships for these last fifty years [since 1600.] I say that the fore-named kings, especially the Spaniards, and Portugalls, have ships of great bulke, but fitter of the merchant than the man-of-war, for burthen than the battaile."

There were not at this time 135 merchant ships of 600 tons average each in England although that number had been found in the twenty-fourth year of Queen Elisabeth, but they had the advantage of being far better adapted to commercial purposes. Raleigh calculated that there were in 1650 no less than "400 saile of merceants fit for the wars, besides the colliers of New-castle, which had the reputation in those days of being the finest sailers and most windwardly vessels in England. Like our own coasting vessels and clippers, in comparison with the larger shipping, these ', hoyes," as they were called, were highly prized for their speed and light draught of of water, qualities which have ever been held in high repute, and were far superior for usefulness even in battle, according to Sir Walter Raleigh, than the cumbrous ships of the Royal navy. This eminent authority also denounced very large naval ships because, "less nimble, less mainable and very seldom employed; a ship of 600 tons will carry as gode ordnance as a a ship of 1,200 tons; though the greater have double the number, the lesser will turn her broadsides twice before the greater can wend once, and so no advantage in that overplus of ordnance."

We conclude this sketch with a short summary of the comparative qualities of the ship of different nations in the middle of the seveteenth century, from "Fuller's Worthies:" "First, for the portugall, his carvils and caracts, whereof few now remain (the charges of maintaining them far exding the profit they bring in); they we the various drones on the sea the rather because their seeling was dam'd up with a certain kind of mortar to derth the shot, a fashion now by them disused.

"The French, however dexterous in land battles, are left-handed in seafights, whose best ships are the Duch building. The Duch built their ships so floatly and buoyant they have little hold in the water, in comparisons to ours, which keep tho better winde, and so outsail them.

"The Spanish pride had infected their ships with loftiness, which makes them quit the fairer markes of our shot. Besides, the winde hath so much power of them in bad wheather, so that it drives them two leagues for one of ours to the leeward, which is very dangerous upon a lee shore.

"Indeed the Turkish frigots, especially some thirty-six of Algier, formed and built much nearer the English mode, and manned by renagadoes, many of them English, being already to nimble-heeled for the Duch, may here-after prove mischievous to us, if not seasonably prevented."

W. W. B.

INTERCOLONIAL RAILWAY.

We shall now proceed to expose some of the misrepresentalions made by the deputation that waited on the Colonial Secreatary; and by those who spoke at the meeting held at the Thatched-house Tavern, when the Compagny was first formed. At the meeting.

Hon. Mr. Estcourt said:—

"At the time when what was called the rebellion in Canada broke out, I was well acquainted with the movements of the 43rd Regiment. That regiment was stationed on the sea board of New Brunswick; it was of the greatest importance that all succor that could be afforded, should be marched with every rapidity that was possible to the places where operations were going on in Canada. The regiment made a most difficult passage through the midst of the country, *which had scarcely been explored before they cut their way through*—in short, it was one of the most brillant operations, as deserving to be recorded by a historian as the famous expedition of Cyrus, which was so fortunate as to receive a place in history, and an historian in Xenophon; it was something that could not fail to make an impression upon a non-military as well as a military mind. I know it did upon mine."

This was corroborated by the Hon. Captain Vivian, who "alluded to the march of the 43d Regiment through the wilderness, having himself taken part in that march, as an officer of the Regiment."

Now this tremendous—this *brillant march* worthy of being classed with the famous expedition of Cyrus, and recorded by Xenophon, happened to be no march at all; the men were comfortably wrapped up, and conveyed all the way from St. John to Quebec in sleds; from Fredericton to the head of Lake Temiscouata they travelled chiefly on the ice, and from thence to River du Loup, on the bank of the St. Lawrence (39 miles) there was a good winter road. There was no difficulty whatever to contend with but the low temperature of the atmosphere. Far different was it in 1812, when the 104th Regiment travelled over the same ground, and actually had to cut their way through from the Lakes to the settlements on the St. Lawrence.

Lord Bury, in alluding to the military stores in the arsenal at Quebec, and required for the Crimean war, said to the Colonial Secretary—

"They were ultimately, I believe conveyed on sleighs over the very line through which this railway will pass, which we wish to undertake.',

Not so. They were convoyed through Fredericton to St. John, over the line where the 43rd accomplished their brilliant march *in sleighs*. His Lordship also said—

"The harbour of Halifax is the only harbour, oven so far south as New York, which is never closed by ice; you can enter the harbour of Halifax at all seasons of the year.

In these few words are two palpable mistatements. The harbour of Halifax *is occasionally* closed by the ice,—that of St. John *never*. Perhaps his Lordship never condescended to look at a map of New Brunswick; but he is ignorant of the existence of St. John; he ought to be aware that there is such a place as the Bay of Fundy, where the high tides render it impossible for any port to freeze up. But what must we think of Messrs. Cunard and Haliburton? If Lord Bury was ignorant they were not, and and yet they stood by and heard him make make the absurd misstatement, and did not contradict it; But the following is richer yet;—

Judge Haliburton,—"We know as little of what goes on in Nova Scotia, at Toronto, or at Kingston, as we do of what goes on at Dantzig or at Hong Kong; I can much easier go now from here to St: Petersburg than I *can go from Halifax to Quebec!*

Sir E. Bulwer Lytton,—"Indeed!"

Judge Haliburton.—"I can do so much more comfortably, and at half the cost."

Lord Bury,—"*There is no road between the two not even a track.*"

This is stretching it pretty well. One can travel from Halifax to St. John in 12 hours, thence to Portland, Me: in 20 hours; thence to Quebec by rail in 12 hours; total 44 hours or we may reckon three days including stoppages. The fare we believe does not exceed four pounds. We rather think it would puzzle the Judge to travel from London to St. Petersburg for four pound, or to accomplish the journey in three days.

As to Lord Burys silly remark, the Judge knows better, should have promptly contradicted it. There is a good road all the way from St. John to the Madawaska, and a good road from Lake Temiscouata to River du Loup, and thence to Quebec. Of the state of the road in the intermediate spece (some twenty or thirty miles) we know but little: but it is practicable, as the mails are conveyed over it. (*Head Quarters.*)

THE COLOURS OF A REGIMENT.—There is another thing which strikes the eye of a civilian who watches the manœuvres of our Infantry, and that is the weight and unwieldiness of the Queen s and Regimental colonrs. These may doubtless owe much of the respect and attachment shown to them to their antiquity and the prejudice against change, but still what is their real utility? Have they even a negative virtue? Who can see the slim figured subalterns whose duty it is to disply these ensigns, and behold them staggering under their fitful flappings as each gust of wind distends a surface big enough for the mansail of a Ryde wherry, without being reminded of the efforts of what Dickens calls "a human sandwich," who endeavours to "war" across the street in the teeth of the wind? But were these the only evils we might "grin" and (let the Ensigns) "bear it" but unhappily there are other more serious misfortunes in the display of these attractive stands which flaunt in the "ill wind which blows no one any good on the field of battle. It has been stated by an eye witness that at the battle of the Alma the enemy especially picked out our colours as a mark for the rifles. Thus it was so many Lieutenants, Ensigns, and Serjeants fell. The 33rd Regiment is reported to have lost 20 Serjeants killed and wounded. The Queen's colours were struck in 14, and the Regimental colours in 11 places, and the colours of the Scots Fusilier Guards were riddled by 15 bullets. There should surely be some very great advantage in displaying the colours to counterbalance their deadly effects as a target. To a civilian this advantage does not appear; therefore he cannot help venturing an opinion that we might take at least one advantageous lesson from some of our neighbours, and substituted something light and portable, and placed in the hands of ablebodied Serjeants. As mere rallying points for the men, surely something more convenient and equally useful might be devised than these cumbrous emblems of nationality, which from the traditional value attached to them, added to the care and anxiety of every Officer in action, from the General in command to the junior Ensign. In the critical moments of the hour of battle sitis surely unnecessary to add to the responsibility of of any commander, and if less honour were attached to these silken emblems of the "pomp and circumstance of glorious war" the chief would have one care the less, and I think that the two Ensigns might be more serviceably employed with sword and revolver than in trying to protect their embarrassing burden from the clutches of the enemy.— *Notes by a Looker*