

gentlemen whom, after long personal experience of statesmen and governments, I can pronounce equal to any in the thoroughness and care with which they do their business of governing a great community.—I indeed have never conversed with any statesmen who seemed so thoroughly masters and authorities in their work."

THE HOUSAC TUNNEL.

We take the following from the Governor of Massachusetts recent message to the Legislature:—

"This enterprise has now been in the hands of the contractors one year and nine months. The progress for the first year was slow, as the machinery was imperfect, and the contractors, though accustomed to large public works, were inexperienced in tunnelling on an extensive scale. For a long time they could not obtain enough labourers to man the works as fully as they desired, but for the last six months there has been no difficulty in obtaining as many as they could employ to advantage, and the progress made is much more satisfactory.

The central shaft is now finished down to the grade, and the contractors are working from that both ways, though as yet for the want of machinery, they are unable to make great progress. Thus far there seems to be no serious obstacle to an early completion of the tunnel,—certainly sooner than the stipulations in the contract require. The contractors have performed their work generally to the satisfaction of the engineers in charge of the tunnel, under the authority of the State. The line has been carefully examined recently, so that no reasonable doubt can be entertained that the position of the central shaft is correct, and that the headings will meet and form a continuous tunnel in a straight line from end to end.

The amount of work performed by the contractors, Messrs. W. & F. Shanly, is \$1,248,184.31, and the reserve, held as security for the faithful performance of the contract, amounts to \$508,136.82.

The amount to be paid them will increase each month until the contract is completed, as progress from the four faces will be at least one-third greater than has been attainable up to this time working from only two. The whole length of the tunnel now opened is thirteen thousand six hundred and twenty-two feet, or nearly two and seven-twelfth miles. The distance remaining is eleven thousand four hundred and nine feet, or very nearly two and two-twelfths miles.

THE GATTLING GUN CONTRACT.

"The London *Broad Arrow*, which is recognized as the best authority on such matters, prints the following account, somewhat different from that which has been in circulation, regarding the contract for mitrailleuses given by the British Government to the Colt Company:—Now that the Americans have begun to crow about supplying England with artillery, it is quite time that the mistakes which have been made by more than one of our distinguished contemporaries, concerning the Gatling gun were set right. According to the American Register, "More than four hundred mitrailleuses are to be sent forthwith across the Atlantic for the service of the British army;" and the hope is expressed that we shall make good use of them, "should the time ever come for the British lion to do something more valorous than merely to show his old teeth to those whose hostile intentions can scarcely admit

of a doubt." That of course remains to be seen, and Brother Jonathan is aware we can only do our best. As to the facts, however, neither is our American well wisher nor our English contemporaries correct, one of whom states that sixty batteries of the small Gatling gun have been ordered, and the other corrects the statement with a great show of superior knowledge by affirming that "the present supply is to be limited to twelve weapons. The truth is, twelve of the Gatling guns of 45 bore have been ordered from America for the Government absolutely, and fifty additional on the understanding that they will be taken. Meanwhile fifty more of these guns are being manufactured by Sir William Armstrong, at the Elswick Ordnance Works, in expectation that they also will be taken by the Government. As it is understood to be the intention of the Government to arm each of our ships of war with a mitrailleuse, in addition to supplying a certain number to the army, it is clear that several hundreds of this arm will be required, and it is probable the orders for them will be divided between the English and American manufacturers. If the British lion's teeth are growing old, he can at any rate get a new set.

A NEW RIG FOR STEAMSHIPS.—The London *Shipping and Mercantile Gazette* gives an illustrated description of a new rig for steamships, the chief advantage of which is the avoiding of the resistance offered by the conventional shrouds, yards, &c., when going head to wind under steam. The whole number of sails in the plan are four, viz, jib, foresail, mainsail, mizensail. The bowsprit is very short—a mere billet-head. The masts are secured with one stay and two back-stays each, and are built in with the ship. On each mast there are only two yards—a lower and upper, the former being secured to the mast just above the rail, and works on a sort of a semi circle, and is braced about by means of braces leading both forward and aft. The lower yard has a slit in it from yard arm to yard arm, and inside the yard there is a roller on which the sails roll down. It can be set, inch by inch, or by a foot or a fathom, as it is wanted. The upper yard is secured to the mast, by an iron parrot or traveller, and, like the lower, has braces leading both forward and aft, and lifts to steady it. The sails are made in the ordinary manner. The upper yard is, of course, shorter than the lower, and the difference in the spread of the sail at the head and the foot, is only sufficient to let each twine of the leach rope, while rolling up, lay inside each other, so as not to overlap, means being provided for preventing the rope from cutting the sail. The upper yard is hoisted by means of halyards which are rove through cheek blocks, and on each side of the masthead, and through a block on the yard, and the sail may be set at either end of the halyards, as they both have purchases on them, one leading down on each side of the mast. A steamer thus rigged may carry all the sail-propelling power of an ordinary sailing ship, with only her pole masts opposed to advance winds, as the sails when lowered are stowed fore and aft, and thus give no more resistance to the wind than the stowed sails of a fore and aft schooner.

On the 17 ultimo, the final operation in the construction of the Fraser gun was performed at Woolwich. It weighs 35 tons 7 cwt., and will throw a 700 lb. shot so as to pierce iron armour 15 inches in thickness. The ordinary charge of powder is calculated at 120 lbs.

EXPLOIT OF HER MAJESTY'S SHIP "MYRMIDON."—The *Toronto Daily Telegraph*, after recalling the outcry made against the captain of the *Bombay* when she sank the *Merida* in a collision, and reminding Americans across the Lake that Captain Fyfe's was an error of judgment, that he did not knowingly sacrifice American lives, asks, "What will Sumner and Butler, and the other fire-eaters, say of an incident that happened during the late hurricane on the coast of Florida? Fourteen vessels carrying the American flag were caught in the gale of the 11th ult., driven on the coast within a few miles of Key West, and lost, with all their crews; and ten United States men-of-war saw the storm-tossed vessels, heard the cries of the mariners, but stirred neither hand, nor foot, nor canvas to save them. A captain, more humane than his fellows, rushed to the American superintendent at the light-house at Key West, and demanded a life boat, but was actually told that he would have to deposit \$50 as security before taking it out, just as suspicious characters are required to pay in advance or leave luggage at hotels and livery stables. The lifeboat was at length got out, but it was too late, and 14 ships went down like 14 stones under the eyes of their countrymen. Meanwhile the English ship *Supphire*, caught in the same gale, was hoisting signal of distress, and away went Her Majesty's ship *Myrmidon* to her assistance, with only 18 tons of coal in her bunkers. When her coal gave out, she beat about under canvas, finally rescued the *Supphire*, and returned to port, and expressed her willingness to go out again to search for the American crews. What will our American crews say of this?"

The inhabitants of Luxembourg have been signing a voluntary plebiscite on the question of the independence of the Duchy, in the form of an address to the Grand Duke. This address in a few days obtained 43,773 signatures; all those who signed it being natives of Luxembourg, over twenty-one years of age, and in the enjoyment of civil rights. The address implores the King to save the country, and never to permit its distinct to be disposed of without a free vote of the population. On Monday, at a meeting of the Chamber of Deputies, the Minister of State declared that all the grievances put forward by Count Bismarck were founded on false reports. The Minister read the text of the note from the King of Holland which ran as follows:—"I in every way approve the conduct of his Royal Highness and of the Ducal Government with respect to the Prussian note. Let us together defend the London Treaty of 1867, and the honor and the independence of the Grand Duchy." This was received with unanimous cheering. On Tuesday the Chamber met again and voted the following order of the day:—"The declaration of Germany that the Federal Government no longer holds itself bound to respect the neutrality of the Grand Duchy in the execution of military operations has produced a deep and painful impression on the country. The Chamber again proclaims the devoted attachment of the inhabitants of Luxembourg to the dynasty and to the institutions of the country, and its members entertain feelings of the deepest gratitude for the devotion which the Grand Duke and Prince Henry have displayed in defending the rights and interests of the Grand Duchy."