question submitted for decision, and the ruling of the umpire in favor of the American pretention has the force of a precedent so far as the Bay of Fundy is concerned But it is to be remembered that one of the headlands of that bay belong to the State of Maine, and the award cannot be held to apply to the Bay of Chaleur, inasmuch as the question submitted had no reference to the proprietorship of the latter bay, and as both its headlands belong to British North America.

With the single exception then of the Bay of Fundy, American vessels have no right whatever to fish within three miles of the line stretching from headland to headland as the bays on the coast of British North America, within the limits hereinbefore set out,—their rights are strictly defined by the Convention of 1818, and must be confined within the limits therein specially mentioned. The general rules of International Law, the provisions of the Treaty of 1783, and the privileges extended to them by that of 1854 cannot be invoked in order to liberate them from the terms of the compromise of 1818, construed and interpreted according to the then established custom and usage of the British and American Governments. —*Revue Critique.*

ANCIENT GUN CARRIAGES

Complaints are rife in the smaller ships of war, armed with 64-pounder rifled guns of 3¼ tons weight, as to the difficulty of working these weapons rapidly and efficiently in steaming round targets at high speeds and with great helm movement. These converted guns are mounted on common wooden four wheel truck carriages, if not of the same pattern as was used in the Ark, at least of the identical one employed a couple of centuries before "the reign of Queen Anne." They require fourteen men to manage them, or the same number that is commonly employed with the 12 ton gun on Scott's mechanical slide carriages. And the men find it impossible to change the direction of the gun with sufficient rapidity to follow the movements of the helm and of the ship. Thus, the opportunity of firing whilst the target is in bearing being let slip, the gun becomes practically useless unless the tactical movements of the ship be stopped for a time. Whereas the heavier guns, working on long pivoted slides, turn not only rapidly, but with an even mechanical motion, which can be easily stopped when the sights are aligned, so that, if necessary, six men can manage the 12 ton gun more easily and quickly on Scott's mechanical low carriage and high slide, than fourteen men can the 3¼ ton gun with ropes and handspikes, on the ancient four-wheel truck carriage. As Captain Scott has adapted his apparatus to the anti torpedo carriage for the little 20 pounder on the upper deck of ironclads, why cannot he save our navy from the reproach of such a clumsy old-world contrivance for working rifled 64 pounders? Nor is this the only mischief which these antiquated gun carriages do; for, when by stopping the ship they do happen to be fired, the whole force of recoil is concentrated on four trucks which stand near one another, conveying a severe concussion to the deck and beams; whereas the Scott gun slide spreads the shock over a large area, and traverses on strong metal racers, which serve to strenghten the deck and beams beneath. Some importance attaches to this matter, as we have several ships of 1100 tons burthen mounting only four guns, two of which are thus partially disabled; whilst the other two are 7-inch 6½-ton guns, mounted on very inefficient slides, which, though much better than the antiquated truck, are much inferior in facility and regularity of working to that used with guns from twice to nearly six times their weight. The class of ships to which we allude are reduced to a very helpless, inoffensive state in the matter of armament; and this is rendered oven more deplorably by comparison with the ease and safety experienced in working the 348 heavy guns of from 9 to 35 tons weight, which are mounted either partially or wholly according to Scott's mechanical designs. Why should the more ponderous weapon be the easiest to control, the quickest to aim, and the most rapid in its fire, when used at sea in lively vessels in devious turning motion?—*Broad Arrow.*

THE LAST OF THE ARMSTRONG GROOVING.

The last of the several Armstrong system of rifled guns, all of which have long ceased to be manufactured, is being withdrawn from service. The A and I Batteries 1st Brigade Royal Artillery, have returned their 12-pound multigroove breechloading Armstrong guns and ammunition into store at the Royal Arsenal, Woolwich, and the naval boat-guns, will, in due time, follow suit, 9 pounder muzzle-loading guns will be issued in lieu, rifled on an improvement of the "Woolwich" system, which, six years ago, superseded the Armstrong "shunt" system in heavy guns. The improvment on the "Woolwich" grooving consists in the abolition of the gaining twist, and in approximating the cross section of the groove to the Scott centrical system, though, as the short bearing weakening ring of studs fails to give rotation to double shell of the length originally proposed for this gun, it has become necessary to sacrifice much of its efficiency in this respect, by reducing this shell in length, weight, and bursting charge. The walls of the present reduced double shell, which are only half an inch thick, are perforated by two rings of stud holes, each a quarter of an inch deep and three-quarters of an inch in diameter, on one of which the effort of rotation is concentrated, thus weakening the shell, whilst failing to secure the desired spin in the longer projectile which the gun was designed to use. At present, the 16-pounders are in course of construction to supersede these faulty guns in the Royal Artillery. As the erosion of the bore, from the large escape of gas through the deep and wide grooves, caused deep longitudinal furrows in all parts of the bore of the bronze gun, the material had to be abandoned owing to this form of grooving. Some idea was entertained at one time of substituting iron flange strengthened projectiles, the long bearing of which would fill up its shallow, narrow grooves, to save bronze on the long projectile; and it may be worth while considering whether what was thought good for the bronze might not also be good for the steel guns; and whether the rifling of the 16-pounders, now in course of manufacture, might not embody the long-bearing, shallow grooves, and long shell system, which secures rotation with the least strain on the guns and on the projectile.—*Broad Arrow.*

THE NEW GATLING.

The first of the Gatling guns ordered from Sir William Armstrong and Co., and which is the first of the "machine guns" manufactured in England, was received on the 8th inst. at the Royal Arsenal Woolwich. It is similar to those which were received from America the year before last, with slight modifications. The calibre of the barrels is the same as that of the Martini Henry rifle, and 4000 cartridge cases for this gun arrived some days since from Elswick, which have been despatched to the Royal Laboratory to be filled. The breech elevating arrangement is of an entirely novel character. Two screws, of opposite threads, upon the same shaft, which is turned in the ordinary manner by a small hand wheel—impart motion to the end of an apparatus, bearing a strong analogy to that used by children for moving toy soldiers upon, thus lengthening it or shortning it as required, and elevating or depressing the breech of the gun. The "double V screw" for traversing the gun by a simple movement has also been applied, as well as the opening in rear of the lock cylinder casing, for withdrawing a damaged lock when necessary. Upon the summit of the "carrier" is a gun metal disc, forming a support for the "drum" containing the cartridges. This can be revolved at pleasure by the hand, dropping its contents one by one into the grooves of the carrier beneath. Upon the front of the gun-carriage, attached to iron standards secured to the axle tree boxes, is a steel screen ½ inch thick, entirely protecting the gun, carriage, and gunners. It is hinged, so as to fold up for packing. Eight "drums" for feeding the gun can be carried with the carriage and limber—two within the axle tree boxes, and two within the limber boxes. Each drum contains, when full 400 cartridges, consequently, 3200 rounds of ammunition can be carried with the gun, irrespective of any ammunition wagon. Both carriage and limber are constructed in the lightest possible manner, but this has at the same time been combined with great proportional strength. The wheels are upon the "Madras pattern," with excessively slender spokes and felloes. It is understood that an objection has been raised by the authorities to the use of Gatling guns for field service, owing to their comparative shortness of range when opposed to such weapons as the 9 or 16 pounder, and that they will be condemned to take the place of light field guns for resisting boarders on the upper decks of our men of war.—*Broad Arrow.*

ANOTHER BABY.

The second "Woolwich Infant," as the 35-ton gun is called, was completed at the Royal Gun Factories, Royal Arsenal Woolwich, on Tuesday, the process of shrinking on the trunnion ring having been successfully performed in the presence of a number of officers and others interested in the operation. All the other stages of welding the successive coils one over the other, of boring or rifling the barrel, and screwing in the cascable at the breech end has been previously performed, and the gun has now only to be proved and vented to be ready for service. Thirteen of these immense guns, which are specially intended for armour plated vessels and in coast defences, are now in various stages of completion, while only one of the number ordered to be commenced. Nine of these guns are to be bored out to the calibre of 12 in., to which the original "Woolwich Infant" was enlarged before the inner steel tube cracked. The boring of the remainder will, it is understood, await the result of future experiments. The original gun has not been fired since its mishap; it is, however, to undergo further trials at the convenience of the committee of Explosives, who are now engaged carrying out experiments with various descriptions of gunpowder in guns especially converted for that purpose.