

MUST HAVE A GRIEVANCE!

THE Americans—or at least some of them—seem to be greatly alarmed that the *Alabama* dispute is about to be settled, and that they will actually be left without a standing grievance against Great Britain. This would be dreadful to some classes of the "great Republic," whose stock-in-trade of threats and abuse of England, would then become almost meaningless. Meetings have been held and petitions signed in some of the Eastern cities, asking the Senate not to ratify the Treaties made by the Hon. Reverdy Johnson, the Minister to the Court of St. James, and Lord Stanley, the late Foreign Secretary. This action cannot be taken on account of any unfairness in the agreements arrived at after so much trouble. Nothing could be fairer than the terms of the *Alabama* Treaty, and the objections being raised against it in several parts of the Republic, simply evidence that there are some who do not want to establish cordial relations, but who wish to retain a grievance against Great Britain, either with a view of complicating the relations of the two countries, or of badgering England into agreeing to unreasonable terms. The facts of the case, we submit, fully establish this view. It is well known that Secretary Seward could easily have secured a fair and honourable settlement years ago if he had not thrown barriers in the way. He was evidently bent on keeping the wound open. Then, when Mr. Johnson had come to an agreement with Lord Stanley some months ago, Mr. Seward interposed fresh objections; that the arbitration should be held in Washington, being one of them. Anxious for peace and amity, Great Britain yielded to Mr. Seward's wishes, and the documents were at last sealed and signed by the representatives of the two powers, but scarcely is the ink dry, before some classes of Americans begin to petition that the Senate shall refuse to ratify the treaties, and undo all that has with so much difficulty been accomplished! We do not believe the better portion of the American people want this result, or that they do not earnestly desire the *Alabama* dispute to be set at rest for ever in the just way proposed. But, in any event, our neighbours may rest assured that England will not allow herself to be brow-beaten about this question, and that whilst she is willing to act in the most liberal spirit for the sake of preserving that good will which ought to exist between the two great Anglo-Saxon Nations, she will not be bullied nor driven into agreeing to unreasonable terms. It will certainly be very great trifling if the Senate refuses its assent to the action of its Ambassador, Mr. Johnson, and disappoints the hopes which everybody has had that cordial relations were about to be established between the two Governments. Such a result would be decidedly unfortunate and dangerous, for it would simply evidence that the American Government, as well as some of the people, do not want to settle the *Alabama* question, but that they wish, so far as England is concerned, always to have a standing grievance.

THE GODERICH SALT WELLS.

WE had recently the pleasure of seeing these now famous salt wells. There are some of them situated on one side of the Matiland River and some on the other—about five in all are in working order. They are really well worth going to Goderich to see, especially to those who have never seen the Onondago or other salt wells. The brine is pumped up out of the wells, in some instances about 1000 feet, by means of steam engines, and is conducted by pipes to the Reservoirs, into which it runs in a continuous stream. The Reservoirs which are of wood and uncovered, stand mid-way between the well and the building in which the salt is made. In the building which we more particularly examined, there were one hundred and four kettles. Between each row of kettles there are tubes containing the brine, which is run into the kettles by turning a tap, whenever it is required. After boiling for some time, the salt forms on the top like a scum, but after it has attained a certain consistency it sinks to the bottom. It is then scooped out of the kettles with a sort of shovel made for the purpose, and thrown into baskets, which allow any brine thrown in with the salt to escape. The basket is then emptied into bins immediately adjoining, and the salt may be said to be made. A simpler process it would be difficult to imagine.

The discovery of these wells has added very much to the importance and business of Goderich. One well we visited made about ninety barrels of salt per day, and we suppose that there must be turned out

nearly or quite four hundred barrels daily taking all the wells together. Considerable capital is now invested in the enterprise, but it is nothing to what we believe it will be before five years. The quantity of brine seems to be practically exhaustless. The vein has been struck as far off from Goderich as Kincardine—a distance of about thirty miles—and a salt well is now in active operation in that enterprising village. The quality of the brine is said to be unsurpassed even by the best salt districts of New York State—in fact, a leading New York Professor has reported the brine to be of the very strongest kind. This being the case, there is every reason to expect that the production of salt at Goderich will go on increasing from year to year, and if the American market were only opened to Canadian trade, Chicago, Cincinnati, and all the Western States would become tributary to Goderich for salt. If Canadian salt were admitted into the States free of duty it is not too much to say that Goderich would soon rise into a bustling city, and its salt wells become celebrated all the world over. When a new Reciprocity Treaty is negotiated—if that time ever comes—it would be well for our Legislators to mind our salt interests, and if possible have that useful article placed on the free list. The people of Goderich have their hopes turned in this direction; it would be a pity to disappoint them!

We believe it is quite correct that the New York salt dealers have been trying to undersell the Goderich companies. That a brisk competition is going on is undoubted—and if the New Yorkers could once close up the Goderich wells, we doubt not prices would soon be put up again to the old figures. This competition, together with the fact that the American market is practically shut against Canadian salt, has given rise to a demand that the American article shall no longer be admitted into Canada free. It is rather unfair that our salt-makers should be shut out of the United States whilst those of Onondago and elsewhere have a monopoly of their own market, and can and do try to render our own unprofitable to our own dealers. There is considerable hardship involved in this. But whether our Dominion Parliament would feel disposed to comply with the request for the imposition of even a moderate duty, we very much doubt. We would rather advise the people of Goderich to rely more on efforts to reduce the cost of production. We are glad to learn that by new patents which have recently been obtained, and which are now being tested at Goderich, there is every reason to believe that the cost of producing each barrel of salt will be largely reduced. The experiments had so far advanced when we were at Goderich as to make success almost a matter of certainty, and if all goes well, we should think that the Goderich companies need fear no competition whatever. Their brine cannot be surpassed, and if once the cost of production is reduced to a minimum, they may defy, we should think, all attempts to undersell them.

The production of salt is not only important to Goderich, but to all Canada. We felt very big over our discoveries of coal oil. But our salt wells are at least equally important, and deserve every reasonable encouragement. When therefore any merchant wants to lay in a stock of salt, let him not forget Goderich, and that our own country now produces some of the best and cheapest salt in the world.

RAILWAY RAIL REPAIRING.

THE Chicago Railway Review gives a long account of a recent excursion on the Michigan Southern Railroad, for the purpose of examining the new process of welding rails by pressure instead of hammering, and at which nearly all the Chicago Railways were represented.

This process is the invention of Mr. Baines, Manager of the Toronto Steel, Iron and Railway Works, and although it has been for some time before the railway public, has not had as much publicity given to it as its great importance deserved, and we now purpose briefly to describe it.

The rails to be repaired are taken from the cars and slid along skid rails raised to the level of the furnace doors. A batch of ten rails is prepared for the heat by placing on the ends a patch of iron of the requisite length and thickness, tapered towards the centre of the rail. The rails are then slid into the furnace, which is constructed with doors on opposite sides, so as to admit of their being passed entirely through, thus affording means to subject any part, four feet in length, with the patch, to a welding heat. One rail at a time is withdrawn, and placed on a carriage moving on a

truck, which carries it opposite the rolls. The rolls are known as Baines Patent Reversible Rolls. Passing under the rolls only so far as the welding heat extends, the motion is reversed, and the rail returns thoroughly welded under the pressure of eight tons. The rail is then turned on its side, and passed under the finishing rolls with a pressure of twelve tons, on leaving which a circular saw cuts it to the standard length.

This mode of repairing rails has had a test of over two years on the Great Western Railway, and the Chief Engineer, Mr. Reid, gave the following statement of the result of two years work:—

The rails thus repaired are much superior to those mended by the hand saws block, both in point of durability and workmanship. The welding is much more thoroughly executed and the form of the rail is more perfectly preserved, even in cases where the ends have been so badly bruised as to necessitate their being cut off altogether under the old hand system of repairing. A large number of the rails repaired by Mr. Baines two years ago are still in the track and in good condition, in fact my experience has been that in nearly every case the mended portion *outlasts the body of the rail*. The saving in cost is very great indeed, and, of course, one of its chief recommendations.

The Michigan Southern and the Memphis and Charleston Companies have now adopted this process, the former having erected very complete and expensive works. The report of their Chief Engineer, Mr. Paine, is very conclusive as to the saving effected. In it he gives the result of ten days of operation, as follows:—

"1834 rails repaired (210 in the center), average length of patches on each rail 35 inches; cost per rail, 75¢. cost per foot, 2¢; these prices include loading and unloading of rails. Something must be added for the cost of increased transportation of rails. Last year the repairs of rails at the shops where there was power blast averaged 57¢ per rail and 68¢ per foot, not including the loading and unloading of rails.

These three roads are as yet the only ones operating the rolls, but contracts have been made for their general introduction throughout the South, and with nine or ten roads in Ohio and Indiana.

The *Railway Review* summarizes the advantages derived from the use of the Rolls as compared with what is generally known as the Swage block and hand process:—

1—Any rail, however badly damaged, can be thoroughly repaired, and so, many rails now sent to the rolling mill in consequence of the inefficiency of the Swage block, can be made serviceable for a period of two or three years.

2—The weld being the work of a few seconds, when the iron is at the exact welding heat, is necessarily much better than one formed by a repetition of blows on a rapidly cooling material.

3—The ends of rails repaired are uniform in height and section, and must fit the fish-plate.

4—An excess of iron in the patch provides that a sufficient length shall be sawed off to secure a thoroughly welded end. In this respect the Swage block is defective.

5—Railroad Companies fortunate enough to own good iron, even if badly worn, have now the means of retaining such rails in their track for two or three years longer, instead of delivering first quality bars to the Rolling Mill and receiving in return, in too many instances, rails of a very inferior quality.

6—The expense of repairs, setting aside the quality of the work, is compared with the Swage block, a mere trifle, as is evidenced by Mr. Paine's statement.

Finally, each furnace heats ten rails and there are fifteen heats a day, ten hours' work. Mr. Paine's estimate embraces the whole cost, punching, straightening (by hydraulic press), and handling. Moreover, only one man the "heater,"—requires to be a skilled workman. Ten men (one skilled), do the same work with the one set of rolls, which by the old process require 24 gangs of men, one of whom (24 in all) must be a skilled blacksmith.

By careful experiment it has been shown that iron welded by pressure is quite as strong as the joined part as at any other, a section under the microscope exhibiting a perfectly homogeneous texture. There appears to us no reason why this process could not be extended much beyond the limits—wide as they are—of rail repairing, and applied in a thousand ways where wrought iron is used, effecting an entire revolution in the manufacture of that useful metal.

Herapath of the 23rd says:—"We have not yet heard who are the old Directors who will retire to make room for Mr. Graham Menzies, Mr. G. Hodgkinson, and Mr. Gillespie, who have for several weeks been selected by Messrs. Franco & Co.'s small committee to be the new Directors. But we hear that Mr. Graham Menzies is the Scotch gentleman Sir Edward Watkin always desired to have on the Board. Mr. Hodgkinson is chairman of the London, Chatham and Dover. Mr. Gillespie is a new man.