

working of glass to the definite forms required by the theory. These steps were taken first, partly because it is exceedingly difficult to find men having these qualifications, but principally to place the bureau in position to examine the product as it was made experimentally. In July, 1914, a practical glass maker was added to the force of the bureau. He is a college graduate of scientific training but skilled in the manipulation of furnaces, and is the sort of a man to make progress at the present stage of the work.

Small furnaces were built and melts of a few pounds of ordinary glass were made in order to become more familiar with the technical side. A larger furnace has just been completed which will handle melts of 25 to 50 pounds. The bureau is now making simple glasses according to definite formulas, studying the methods of securing it free from bubbles, and other practical points. This is to be followed by an investigation of the method of annealing.

COAST AND GEODETIC SURVEY.

Captain Lukens, of the coast and geodetic survey, has reported the discovery of a practical navigable channel from the Bering sea into the mouth of the Kuskokwim river. This river, the second greatest river in Alaska, is 9 miles wide at its mouth and is navigable for over 600 miles inland. The great submerged flats of its delta extend 100 miles out to sea, and it was through this uncharted delta that the surveying steamer Yukon made the discovery of the channel which means much to the commerce of Alaska.

The Kuskokwim is one of the three great Alaskan rivers emptying into the Bering sea which has been opened to commerce as a result of the charting operations of the coast and geodetic survey. The mouth of the Yukon was surveyed in 1898 and in a few years that river became one of the greatest commercial arteries of Alaska. In 1909 and 1910 Nushagak Bay was charted. The survey of the Bering sea in the vicinity of the Kuskokwim was started in 1911 and continued the following summers of 1912 and 1913. But it was not until the past field season that a surveying vessel succeeded in tracing and charting channels through the great delta of the Kuskokwim.

In making the survey, Captain Lukens reports that he took 14,256 soundings covering an area of over 100 square miles. This in itself is quite an achievement when considered in connection with the customary bad weather in Alaska and the fact that in some instances it was necessary to locate soundings by observations on mountain peaks more than 60 miles distant. The whole working season was confined to 83 days and in July alone 29 1/2 of these days were lost on account of the weather being either bad or not sufficiently clear to see the distant surveying marks.

When the new chart showing the newly discovered channel is issued, it will be possible for steamship companies to send vessels to the Kuskokwim and thus initiate the development of the latent mining, fishing, and agricultural resources of that region. The Kuskokwim valley covers many thousands of square miles, and the near future will probably see the Kuskokwim river of commercial importance comparable with that of the Yukon river.

It has been known for sometime that there were large areas of mineral lands along the Kuskokwim with promising prospects of mercury bearing cinnabar, gold bearing quartz, placer grounds and coal lands, whose successful development only waited a reliable means of transportation such as is now promised by the newly discovered channel.

The valley is suited to reindeer grazing, and Captain Lukens reports that already the small initial government herd has grown until it numbers about 6,000. He says that the cost of raising reindeer is very small, as three men can take care of 1,000, and the animals subsist on the country the year round. The meat of the reindeer is comparable to that of our western beef. Even with the small market afforded at present, the native herd owners are becoming prosperous, and now that better transportation is promised, there is every reason to believe that this country will furnish many thousands of pounds of meat for shipment to the United States.

Like other large rivers of this part of Alaska, the Kuskokwim has a large salmon run. With the prospect of reliable transportation facilities, the canning companies are arranging to extend their operations into this region, but the extent of this industry can not be forecasted until after a year of actual fishing.

Plans are now being made in Seattle for the

construction by different companies of two light draft vessels designed especially to take care of the expected development of the commerce of the Kuskokwim river, and still another shipping firm has already announced sailings to the Kuskokwim at the opening of navigation in the coming spring.

Mr. Bryan's Address Before American Peace Society

Mr. Bryan's address before the American Peace society was published in the January issue of *The Commoner*, but through an oversight a part of another speech was included with Mr. Bryan's address. On account of the error mentioned above, Mr. Bryan's address is reproduced below as it appeared in the "Advocate of Peace." Ladies and Gentlemen:

I hardly felt that I had time to come down to your meeting this evening, and yet it seemed to me that the celebration of the eighty-sixth anniversary of a Peace society was so extraordinary an occasion that I could make an extraordinary effort to be here, even if but for a few moments, and I shall occupy that time in the presentation of a single thought. It is not always that one, in speaking, can follow a rule of oratory, which I think has some sanction, namely, that in a speech you should have one theme, that you discuss it, and then stop. There are really three rules in that one rule. It is not always easy to select a theme; it is sometimes hard to discuss it when you have selected it, and it is still more difficult to stop. Now, I shall take one theme, consider it very briefly, and then stop. Not having had time to prepare an address, I shall take a thought that came to me this afternoon. The thought was suggested by the fact that for eighty-six years people interested in the cause of peace have been connected with this society, and have kept up its continued existence. Eighty-six years is a long while, and if we could ask those who organized the society, or its early members, how long it would take to bring the world to the acceptance of peace, they would not have named so long a period as has elapsed.

I attended a medical college commencement in Chicago about thirty years ago, and I recall a prayer offered on that occasion. I never have been able to learn whether the man who offered the prayer appreciated it as much as I did or not. He was praying for the young physicians about to graduate; he prayed that the Lord would give them ability, sympathy, and industry, etc., and, after enumerating all the other virtues that a physician would need, he prayed—and I thought with great fervor—that the Lord would give them "patience," (or "patients"). I did not know then, and have never learned since, how he spelled the word. But it seems to me that every one who is connected with a really great work must realize the need of patience. It is natural that, when anyone discovers an abuse, he wonders why all do not see it, and when he finds a remedy that seems adequate, he wonders why all do not accept it. We all have had the same experience — that is, we have met people who have devoted many years of their lives to something very dear to their hearts; their enthusiasm has outrun their accomplishments, and they have become discouraged.

A man once went to a physician with a breaking out on his hand, and the doctor gave him some ointment, telling him to make an application every day for a month, and then return and report progress. At the end of the month he came back. The doctor asked him how his hand was getting along, and he replied: "Well, doctor, looking at it from week to week, I sometimes think I can see a little improvement, and, looking at it at the end of the month, I guess it is better, and, doctor, it may get well, but I am afraid it won't be in my day." Now, I think we all may have had something of that feeling, and it has somewhat tinged our enthusiasm with sadness to think that after all our efforts we may not live to see the consummation of our desires.

It may be appropriate, therefore, to say a word tonight about patience; to tell you not to allow yourselves to grow weary in well-doing, for the world does move, even if it does not move as rapidly in some directions as some of us might wish. If any of you who have given your hearts to the peace movement feel that it moves slowly, just look at the other things which have been accomplished, and see how slowly

they seem to move. Take, for instance—for to me it is the supreme illustration — the moral code of the Man of Galilee; you examine it, and you see that it fits into human life as no other code of morals does. You find that it covers all the phases of human existence; where it at first seems strange, upon examination it seems most truly true; yet how slowly it has grown! But it does grow. The doctrine of love is, after all, the only growing doctrine in the world; it is the only force to which there can be no permanent opposition; it is the only weapon for which there is no shield.

Take also the measure of greatness which Christ presents—one that we all recognize to be true—and yet how slowly it has made progress. It is the most revolutionary of doctrines that greatness is to be measured by service. The selfish idea is that greatness is to be measured by what you can compel people to do for you; but the real measure of greatness is what you voluntarily do for others. Life is not to be estimated by what you get out of it; it is to be estimated by what you put into it. Now, this needs no proof. It is self-evident truth, and yet how slowly this doctrine makes progress throughout the world.

You are engaged in the promotion of a great cause, and because it is great it does not move rapidly. The trees that stand the blasts of the storm are the trees of slow growth. Those trees that spring up quickly have not great strength. It is because your cause takes hold upon that which is most vital in life and of that which is fundamental in civilization that you must not expect it to run — you must be content if it walks. But it is growing, and we could not face the future with hope if it were not growing. If we could be convinced that the idea of peace was going backward, there would not be a single star in the sky. It is only because we do believe, and believe with all our hearts, that the peace movement is making progress; for that reason, and for that reason only, we believe that the future is bright. We must not expect that the progress will be the same everywhere throughout the world. We have to meet conditions, some of them far from ideal. The ideal inspires, and we look to it and work toward it. We must not be disappointed if we find it impossible at once to realize the ideal. It would not be a high ideal if it were within our reach; it would not be a worthy ideal if it were not lofty enough to keep us looking upward all the time; it would not be an ideal worth while if we ever expected fully to attain it.

But our cause is making progress. There is not a country in the world that has not felt to some extent the impetus of the peace movement; if you have any doubt of it, let me give you evidence that I regard as conclusive and most encouraging. Your chairman has been kind enough to refer to the peace plan which has, by the president's authority, been presented to the world. It was, on the 26th day of April—a little more than a year ago—presented to the foreign representatives residing in Washington. Before a year had expired the principle had been accepted by more than thirty governments representing more than three-fourths of all the people of the world. Now, when the governments representing more than three-fourths of all the human beings on this globe will endorse a plan that contemplates a period of deliberation and investigation before there can be a declaration of war or the commencement of hostilities; when that can be done by governments representing more than three-fourths of the people of the world, and done in a single year, certainly there is no reason for discouragement. Not only has this been done, but treaties have been signed with fifteen of these countries, and ten more have their treaties practically ready. Among the ten whose treaties are practically completed are Great Britain, France, and China, and the three greatest republics of South America. When the ten now approaching completion are signed, as they will be at no distant day, we will have considerably more than one-half of the people of the world living under governments which are linked to us by treaties which provide that neither side shall fire a shot until the cause of dispute has been investigated by an impartial commission. (The nations above mentioned have since signed—thirty is the total number at this time.)

That is the progress that has been made in a little more than a year, and yet this progress would not have been possible had it not been for the preliminary work done in the years that have passed. I rejoice in the prospect today, and in the progress that we now witness; I am

(Continued on Page 11)