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MEMBER OF THE FEDERAL RESERVE
BOARD, BEFORE THE ALUMNI SOCIETY
OF THE UNIVERSITY OF ALABAMA,
AT TUSCALOOSA, TUESDAY MORNING,
MAY 30, 1916.

RELEASED TO AFTERNOON PAPERS, MAY 30th.

EFFICIENCY AND INDUSTRIAL PREPAREDNESS.

We are celebrating the one-hundredth anniversary of the historic city of Tuscaloosa and the eighty-fifth annual commencement of our great University. Although upon such an occasion our thoughts naturally take a retrospective turn, I shall not in my remarks dwell upon the past, rich as it is with lessons of its trials and triumphs, nor will I pose as a prophet and attempt to rent the veil of the distant future. I shall speak instead of the present and of that immediate future which lies within our horizon, and which we can make what we will.

(I.) LESSONS OF THE EUROPEAN WAR.

We are living in a most critical period of the



world's history, a stupendous era, full of opportunity and fraught with grave responsibility. The frightful holocaust on the other side of the Atlantic, with its appalling sacrifice of human life, with its enormous waste and with its pandemonium of calamity and woe, has aroused in the hearts of the people of this country mingled feelings of horror and of pity, but also it has instilled in our minds a better and higher appreciation of our duty to ourselves, to our country and the world. No longer are we lulled into a false sense of security because of our splendid isolation, no longer do we feel that we enjoy permanent immunity because of the three thousand miles of ocean waves that separate us from the shores of Europe; but we have as a nation come to realize that our surest guaranty of peace lies in preparedness for war. The first steps for military and naval preparedness have already been taken, and because of this we are confident that we shall escape any part of the tragedy now being enacted on the three continents of the old world. This confidence is intensified because of the calm judgment and consummate skill of the President of the United States, Woodrow Wilson, who has

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so successfully handled a grave international crisis, maintaining friendly relations, while preserving our national honor and dignity. It is not necessary, therefore, to discuss at length at this time and place, preparedness from a military sense, but it is well that we should consider it from a commercial and industrial standpoint.

(II.) EFFECT OF WAR UPON AMERICAN COMMERCE.

Out of the misfortunes of others has come to a great extent the marvelous prosperity with which this country is blessed today. The temporary depression in the United States which followed immediately the outbreak of the war and which was due to the sudden and complete collapse of credits and to the interruption of the accustomed means of transportation and communication throughout the world, was followed by a speedy readjustment which brought with it from the warring nations and from non-combatant countries whose trade had been principally with the powers at war, millions upon millions of dollars worth of orders, not only for munitions but also for the ordinary necessities of life, which have been pouring in upon this country so that it has been

enriched, according to the estimate of some authorities, to the extent of about three billions of dollars. This golden flood has fairly deluged some of the states to the north and west of us. Alabama and her sister states of the South, while feeling to some extent the impetus of better times, have not received their fair proportion.

(III.) POSITION OF THE SOUTH.

The South, since that day, back in 1881, when we members of that Class made our final bows upon the rostrum in Woods' Hall, has made great progress in all lines of industry, in agriculture, in manufacturing, in mining, in banking and in commercial pursuits, as may be exemplified by the statement that the banking power of the Southern states is now greater than that of the entire United States at that remote day. But our section, nevertheless, has not yet become highly specialized in the arts and sciences, and in manufacturing, but is still essentially an agricultural region and still has cotton as its principal money crop. Because of the inability of the central powers to import cotton on account of the rigid blockade which is being maintained, the South has, during the past year, been deprived of a market for nearly one-fourth of its export crop, so that neither its

manufacturers nor its farmers have reaped that measure of profit which has come to the same classes in other sections. The South is, however, an important part of the United States, and is interested in common with all other sections, in the maintenance of national prosperity. Already there are some indications that a wearied Europe is beginning to turn its thoughts toward peace, and perhaps it may be the mission of our Southern born President to point out the way.

(IV.) AFTERMATH OF THE WAR.

Restoration of peace will necessarily bring about important changes in the world's trade and just what these changes will be and how they will affect business conditions in this country, are problems which are being studied carefully by publicists and business men. These are vital questions here in the South as in other parts of the country, although we may not be as directly affected as other sections for the reason that a smaller part of our business has come from foreign countries or has been connected with war material. We should, however, stand ready to support the Government in any measures that it may be necessary to adopt in order to retain the legitimate foreign trade that we have already

secured, to extend still further our business intercourse with South American countries, besides maintaining a proper balance in our trade relations with the nations now at war. American bankers are permitted under the Federal Reserve Act to establish branches in foreign countries and can thereby facilitate transactions involving the importation or exportation of goods, and it is practically certain that a law will soon be on our statute books creating a tariff commission, whose duty will be to make a close study of changing conditions and to recommend from time to time such modifications of our present tariff laws as may be advisable. I do not speak authoritatively, but I hope that as a measure of commercial preparedness, steps will be taken to encourage the manufacture of dye stuffs in this country, to protect American firms against foreign dumping and to provide heavy penalties for foreign concerns engaged in unfair competition in the United States. American merchants and manufacturers seeking to compete with those of other nations in the markets of the world should be permitted to engage in the contest on equal terms with their competitors, and we should, therefore, favor some arrangement

that will enable American exporters to secure foreign trade in competition with the cartels and combinations of Germany and other countries.

(V.) AMERICAN MERCHANT MARINE.

A serious drawback to the development of our foreign trade is the utter inadequacy of our American Merchant Marine. The South has felt this perhaps as keenly as any other section of the country. We have been handicapped very greatly in exporting cotton by lack of ship room and by abnormally high ocean freights. Rates to Liverpool on cotton have for several months past, frequently ruled as high as \$15.00 per bale, or 3¢ per pound, or about 10 times the normal rate, and this excess has, to a great extent, come out of the pockets of the Southern farmer. American ship yards have been very busy for the past year or more, as private capital has been attracted to shipping by the unusual profits obtainable, but in normal times this activity cannot be expected to continue.

Our wage scales are much higher than those of foreign countries, whose shipping is also, in many cases, subsidized, and, in order to establish an American Merchant

Marine which can be used in the carrying trade in time of peace and as a naval auxiliary in time of war, Government intervention and aid seems necessary. The shipping bill passed the House of Representatives a few days ago, with the support of practically all the Southern members, and will, in all probability, pass the Senate and become a law before the adjournment of Congress.

(VI.) RURAL CREDITS.

Another measure of supreme importance to the South is now in conference, -- the rural credits bill. The South for a great many years has labored under the curse of absentee landlordism and it has suffered from the evils of the tenant farming system. Hardly more than a tithe of its productive capacity has been utilized, for lack of both capital and labor. With the exception of Texas, the Southern states have not attracted their proper share of immigration, either foreign or domestic. Too many of our rural population have found it impossible to make any substantial headway, and finding themselves year after year lacking all of the luxuries and many of the necessities of life, have lost ambition and have

settled down to breathe the sodden atmosphere of a hopeless and aimless existence. The rural credits act will open the way for the organization of national farm loan associations which, in cooperation with the twelve Federal land banks to be established, will make loans on farm lands on long time; payments being amortized so that the total annual installment, including interest and reduction of principal, will amount to not more than 8% of the principal, the interest in no case to exceed 6%. Land owners will thus be afforded an opportunity of improving their farms by ditching, fencing and by the erection of silos and buildings, diversification of crops will be encouraged, cattle raising will be promoted, and the thrifty tenant farmer will be given an opportunity of becoming his own landlord. Many who have heretofore been without hope or definite ambition, will find a new incentive to work and to accumulate with a view to ultimate independence. Southern agriculture will thus receive a wonderful stimulus, and many of the young men growing up on the farms whose ambition now is to go to a town, will find it to their advantage to make a study of scientific farming and to practice it as a

life vocation. Better living conditions in farming districts and greater prosperity for the farmer mean decreased cost of living, less concentration of population in the towns and cities, more schools, better morals, and a happier and more contented people. Prosperity on the farms means larger orders for the merchant, the coal operator, the lumberman and for the manufacturer; more business for the railroads, steadier employment of labor, increased deposits for the banks and a greater demand for loans. Consider what Europe has done for its farmers and how, up to the outbreak of the deplorable war, it had improved their condition, and how the continental powers have been able, through scientific farming methods, to support themselves during abnormal conditions. While the methods adopted in Europe may not be best adapted to the United States, surely with some modifications they can be made effective here. Nearly one hundred and fifty years ago, Oliver Goldsmith wrote his greatest poem, "The Deserted Village." It was a striking exposition of English history and a remarkable forecast of the future.

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates, and men decay;
Princes and lords may flourish, or may fade;
A breath can make them, as a breath has made;
But a bold peasantry, their country's pride,
When once destroyed, can never be supplied.
A time there was, ere England's griefs began,
When every rood of land maintain'd its man:
For him light labor spread her wholesome store,
Just gave what life required, but gave no more;
His best companions, innocence and health,
And his best riches, ignorance of wealth.
But times are alter'd; trade's unfeeling train
Usurp the land, and dispossess the swain;
Along the lawn, where scatter'd hamlets rose,
Unwieldy wealth and cumbrous pomp repose,
And every want to luxury allied,
And every pang that folly pays to pride.
Those gentle hours that plenty bade to bloom,
Those calm desires that ask'd but little room,
Those healthful sports that graced the peaceful scene,
Lived in each look, and brighten'd all the green;
These, far departing, seek a kinder shore,
And rural mirth and manners are no more."

Have we not in American been drifting into the conditions so graphically described? Let us never lose sight of the fact that farming is the most important industry in the world. Without the farm all other business would stagnate and die, the railroads would cease to run, the banks and mercantile establishments could no longer operate, and grass would grow in the streets of our cities, which would no longer be thriving marts of commerce but would become, through famine, whited

sepulchers of the dead. No other business can succeed without the farmer, but the farming business can survive, if left unfettered, without the aid of any other business.

(VII.) WATER POWERS.

Let us now consider for a moment the subject of water. For some years past, we in Alabama have heard a great deal about another liquid, and I am sure that it will be refreshing to turn our thoughts to pure and unadulterated water. We need not discuss its superlative merits as a beverage or as a cleansing agent, but rather let us consider its utility as a means of transportation and as a source of power. Bountiful nature has favored our State in the matter of waterways. Through the Warrior, the Tombigbee, the Alabama and the Coosa, the waters springing from the hills in the mineral regions flow through rich agricultural sections and discharge themselves into the Gulf of Mexico. The work of nature has been supplemented by the National Government and by means of locks and dams on the Warrior and Tombigbee Rivers, perennial navigation has been provided from the coal fields to the Gulf. Already

barges laden with black diamonds pass every day down the river just below the University, bound for Mobile and New Orleans. Through a beautiful valley in northern Alabama, flows the great Tennessee River, a majestic stream which springs from the mountains of North Carolina and Virginia, and flowing through east Tennessee, enters our State near its northeastern corner, and leaving it at its northwestern extremity, turns again through Tennessee and, passing through Kentucky, unites with the Ohio and finally discharges its waters into the mighty Mississippi. Most of this wonderful stream is already open to commerce, but in its course through Alabama, its waters plunge through a series of shoals and rapids, known as Muscle Shoals, which block navigation, but which, if properly harnessed, will furnish one of the greatest water powers in the United States. Locks and dams at Muscle Shoals would render the Tennessee River navigable from Knoxville to Paducah, and would, at the same time, offer to industries electric energy of approximately 500,000 horsepower. When we speak of Muscle Shoals, there results a triangulation of ideas. On one side is transportation,

on another the fertilization of our farms, and on the third, military preparedness. We all know that nitre, or saltpetre, is an essential ingredient in the manufacture of gunpowder and of fertilizers, and that the world's great natural deposits of nitre are in northern Chile. We know furthermore, that the oxygen in the air we breathe is heavily diluted with nitrogen, and that science has found the way, through mechanical means, of accomplishing the fixation of air nitrogen into nitrates. The marvelous efficiency of Germany as a nation is admitted by her friends and enemies alike, by her sympathizers and by her critics. Some years ago German manufacturers began, under adverse conditions, the manufacture of nitrates from the air. When I refer to adverse conditions, I mean that this process of fixation requires enormous power and calls for a tremendous expenditure of energy; and in a country like Germany, having no great water powers, this energy can be supplied at high cost only by the consumption of an enormous amount of fuel. I understand that not less than 300,000 horse-power must be produced in order to manufacture air nitrates on a

commercial scale, and the only nitrate manufacturing plant on the American continent is located on the Canadian side at Niagara Falls. The bill that has recently passed both houses of Congress to increase the efficiency of the military establishment of the United States, recognizes the necessity of an adequate nitrate supply and empowers the President of the United States to make such investigation as he may deem to be necessary to determine the best, cheapest and most available means for the production of nitrates and other products for munitions of war and useful in the manufacture of fertilizers by water power, and he is further authorized and empowered to "designate for the exclusive use of the United States, such site or sites upon any navigable or non-navigable river, as may, in his opinion be necessary to carry out the purposes of the Act, and he is further authorized to construct, maintain and operate, at any site or sites so designated, dams, locks, improvements to navigation, power houses, and other plants and equipment, or other means than water power as in his judgment is the best and cheapest,

necessary or convenient for the generation of electrical or other power and for the production of nitrates or other products needed for munitions of war and useful in the manufacture of fertilizers and other products." The bill furthermore appropriates the sum of twenty million dollars, available until expended, to enable the President of the United States to secure this nitrate supply. I do not know what recommendations the War Department will make to the President, nor can I predict what his choice of a site will be, but I do know that no site in the United States is superior to Muscle Shoals from the standpoint of strategic location, the power that can be generated and the proximity to large deposits of phosphate rock. I wish that I were a word painter, so that I could picture to you the great opportunity that is presented to the people of Alabama, and the far reaching results that would come from the location of this nitrate plant within the borders of our State. Imagine a gigantic dam across a broad and majestic river, a great power house, and beyond, a nitrate plant, on one side of which will be built a large

factory where nitric acid will be produced for use in the manufacture of explosives; on the other side works for the production of ammonium phosphate, where the phosphate rock brought from nearby fields will be combined with the nitrates and converted into that important ingredient of all commercial fertilizers, ammonium phosphate. The waters of the Tennessee in their ceaseless flow toward the Ohio and the Mississippi, can generate at a minimum cost after the initial expenditure has been made, the large amount of power necessary for the operation of these plants. This power, contrary to the fears of many, would not interfere with the consumption of Alabama coal, for it would develop an entirely new industry which cannot be established if dependent upon coal as a fuel. I wish that I could picture to you the other important industries that would follow the establishment of this plant, such as electric furnaces for the manufacture of the finest grades of steel, establishments for the production of aluminum from the vast deposits of bauxite which abound in east Alabama. I would point out to you the wonderful opportunity that would thus be

opened to the young men of Alabama, and I can see in my mind's eye a great school of technology here at the University, where future generations can be taught the principles of efficiency and of applied science, which have done so much for the development of Germany during the past forty years. Surely every man of influence in Alabama will do all in his power to induce the President to locate this plant on the banks of the Tennessee. Many other states have eligible locations to offer, though none in my opinion can at all compare with the one at Muscle Shoals. Every possible influence will be brought to bear by these states to present their own locations in the most favorable light, and it behooves the people of Alabama during the next few months to work as they have never worked before, if we wish to win this great prize, which would mean an immediate expenditure within our borders of twenty million dollars, with industries to follow which will cost at least thirty millions more.

(VIII.) DEVELOPMENT OF ALABAMA'S RESOURCES.

There has been too much talk about the great natural resources of Alabama. The time has come for

action! We must develop them! About two months before the surrender of the armies of the Confederacy, a conference was held by Abraham Lincoln with three Confederate Commissioners, at Hampton Roads. I do not know whether it is history or whether it is fiction, but the story is that at that conference Mr. Lincoln, holding a sheet of white paper in his hand, said to Alexander H. Stephens, "Let me write Union on this paper and you may write whatever else you please." If this story be founded on fact, what an opportunity for the South was lost! If we could bring the people of Alabama to a proper realization of the importance of hard work, of constant and unflagging effort and of efficiency in work; if we could be justified in taking a map of Alabama and in writing across that map in outstanding letters reaching from the Tennessee to the Gulf, and from Georgia to Mississippi, the word "Efficiency," we would have a great and prosperous State no matter what else might be written there. In the South today, our economies as a rule are neither scientific nor potentially efficient, nor do our activities contribute to stop waste and to increase efficiency. We find

waste and more waste everywhere. We have made only a beginning in the manufacture of by-products,-- we can see in half a day's journey, thousands of coke ovens, illuminating the midnight skies with flames which contain many elements of wealth, but which are absolutely thrown away. Because of the nitrogen which it contains, a million tons of cotton seed meal is put back every year into the soil of the cotton fields of the South, although overhanging every acre there are over thirty-three thousand tons of atmospheric nitrogen which the water powers of Alabama now going to waste could take out of the air and fix ready for use as a fertilizer for increasing our production of agricultural staples.

(IX.) EFFICIENCY VERSUS WASTE.

But waste and inefficiency are not to be found alone in agriculture. They are found in the forest and in the factory, as well as on the farm; in mechanical arts and in scientific achievements we lag behind. The Secretary of the Navy, a Southern man by birth and rearing, of ardent Southern sympathies, recently selected twenty-three engineers and scientists as a civil naval advisory or efficiency board, not one of whom was taken from any activity or association of the Southern

states. We are proud of our traditions, yet we have seen other states forge ahead, even the arid states in the rainless regions of the west, which have in twenty years secured from the Federal Treasury one hundred and sixteen million dollars for the accomplishment of their irrigation projects. We are afflicted too much with traditions, resignation, indifference and inefficiency. Too many of the sons of Alabama have left their paternal roof-trees and have sought their fortunes in other states. We must do something, not only to make it to the interest of the young men of Alabama to remain at home, but something that will induce the best elements of the citizenship of other states to cast their lot amongst us. According to a poetic fancy the name "Alabama" signifies "here we rest." It is too bad that any should think this means "here we do not work; here we take our ease," and we should seek to justify the construction of the word "rest" as meaning "remain;" so that the name of Alabama henceforth shall signify, as a matter of choice, and because of the glorious opportunities offered, "hence we will not go; here we remain."