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January 5, 1960

Mr. George I. Baker
Secretary-Treasurer
The National League of Masonic Clubs
15 Alden Street
Cranford, New Jersey

Dear Mr. Baker:

As per our conversation of today, enclosed are two final drafts of the material "Rickover and Education" to be published in "The League News".

Admiral Rickover would appreciate it if you would please substitute the enclosed copies for the draft sent to you yesterday.

Sincerely yours,

Theresa Leone, Secretary to
VADM H. G. Rickover, USN

Enclosure:
2 copies final draft

RICKOVER AND EDUCATION

An address delivered by one of our countries most outstanding scientists before a capacity audience of over 700 Square Club Masons, their wives and friends who were attending the 53rd Annual Convention and National President's Banquet at the Hotel Astor, Friday evening, October 9, 1959, is recorded here for your reading pleasure.

Past National President, Bro. Joseph Montgomery, who presented the Meritorious Award said: As you all know the National League of Masonic Clubs awards its Meritorious Service Medal to some individual who has rendered an outstanding meritorious service.

This year it was unanimously decided by the members of the League to award the Medal to Vice Admiral Rickover, who is best known to all of you as the father of the atomic submarine.

While he is best known throughout the world for the development of the atomic submarine he has many other accomplishments to his credit and he has rendered many outstanding meritorious services which perhaps are not so well known.

For those outstanding services and accomplishments he has received many awards and recognitions. He was awarded the Legion of Merit for his outstanding services during World War II; the citation accompanying that award reads in part as follows:

"Working with foresight and ability, he brought about continual improvements in electrical equipment to meet the developing and expanding needs of modern Naval warfare, thereby contributing to the increased military effectiveness of the vessels of the fleet and to the successful prosecution of the war."

For his service on the staff of the Commander of the Service Force of the United States Pacific Fleet, and as the Commanding Officer of Naval Repair Base in Okinawa, he received a letter of commendation from Commander-in-Chief of the U. S. Pacific Fleet, with authorization to wear the commendation ribbon.

For his outstanding service in connection with the development of the atomic bomb, he later received a letter of commendation from the War Department with the authorization to wear the Oak Leaf Cluster on his commendation ribbon.

He received the Gold Star in lieu of his second Legion of Merit for exceptional and meritorious conduct in the performance of outstanding services to the Government of the United States as Chief of Naval Reactors Branch of the Atomic Energy Commission and as Director of the Nuclear Power Division of the Navy Bureau of Ships.

The lengthy citation that accompanies that decoration concludes with these words:

"...His careful and accurate planning, his technical knowledge and his ability...have proven a contribution of inestimable value to the country's security and reflect great credit upon him and the United States Naval Service."

He received a special Congressional Gold Medal in recognition of his signal achievement in the practical uses of Atomic Energy. He was responsible for the building of the Shippingport, Pennsylvania Atomic Power Station, the first full scale plant for the development of peaceful atomic power in this country.

His accomplishments and decorations are so many that to even mention them would take more time than I have granted, but I am certain with those which I have mentioned you will agree that the League has made a wise choice for its 1959 Medal Award.

You will probably recall that Admiral Rickover was one of the technical assistants who accompanied Vice President Nixon on his trip to Russia.

You've also probably read in the press about his appearance before the Congressional Appropriations Committee. I have before me a copy of the hearings of that committee, and this is what the Chairman of the committee said in the opening of the hearing:

"We are honored by having with us today one of the most distinguished men of the nation, the 'Father of Nuclear Propulsion.' The nation would not be safe today--if it is safe--except for the contribution of Admiral Rickover in the adaptation of nuclear power to submarines and the utilization of atomic energy in both military and civilian enterprises."

I might say that this booklet as it affects us today--you may not have heard about it, I'm going to tell you how you can get a copy, because if you want to know more about Admiral Rickover, more about the Russian situation, more about his ideas on education, you can get this free pamphlet, entitled "Report on Russia by Vice Admiral Hyman G. Rickover, USN," by writing to the Committee on Appropriations, House of Representatives, Washington 25, D. C. It's in question and answer form, the questions are asked by the members of the Appropriations Committee and Admiral Rickover gives the varied appropriate answers, and I know that you will all enjoy reading this book.

With these few remarks, I believe that I have sufficiently introduced to you our Medal Award Winner. So, therefore, Admiral Rickover, it is an honor for me, on behalf of the National League of Masonic Clubs, to have this privilege of presenting you with this Meritorious Service Award, for 1959, and with this citation which reads as follows:

"The National League of Masonic Clubs, in recognition of the meritorious

and faithful service and devotion to our country as evidenced by his pioneering in the field of nuclear power development; his leadership, foresight and engineering skill which contributed to the technological expansion of modern naval warfare and the increased effectiveness of our Naval Fleet, and his display of exceptional outstanding talents resulting in the rapid development of nuclear powered submarines, as well as peace-time atomic power stations, The National League of Masonic Clubs in convention assembled in New York, N. Y., has awarded its ninth Meritorious Service Medal to Hyman George Rickover, Vice Admiral of the United States Navy," signed by our National President, attested to by our National Secretary.

(Applause.)

ADMIRAL RICKOVER: Mr. Chairman, distinguished guests, ladies and gentlemen.

I can accept this great honor which you have conferred upon me only in the name of all the men and women who work with me, in my own organization, in the Atomic Energy Commission laboratories and in the many factories that design, develop, and produce nuclear components.

Credit belongs also to the men in the shipyards and construction organizations, and to many, many others, particularly members of Congress, who have helped our nuclear program. The success of our projects is due in large measure to these people. In rewarding me, you are simply telling me that I am fortunate enough to be the leader of such a fine group. Any credit due really belongs to them.

One thing the Toastmaster touched on is dearer to my heart than atomic energy. That is education. Tonight I am going to take advantage of this captive audience to say a few words about this "extracurricular" activity of mine.

I became interested in education about 10 years ago when I started to develop atomic power plants for the Navy. It soon became obvious to me that many of the men in my organization were not able to do a good job. These men, some of the best our schools could offer, had to be trained for two to three years before they were of any use to us. As a consumer of our educational system, I found I was getting an inferior product.

Around 1954, several years before the "Sputnik," I began to familiarize myself with what the Russians were doing in education. What I saw frightened me, and I began making speeches about education at that time. I then felt that

the problem could be solved simply by raising teachers' salaries to attract better people into the profession.

About two or three years ago, I began to see that salaries were not the only or even the major problem. The basic fault with our educational system lies in the degrading of teacher training in the United States over the past century and a half. I started finding out why this had occurred, and in the last few years I have devoted a considerable amount of time to this problem.

I think it is appropriate that I talk about education here for a short time. The Masonic Order has brotherhood as one of its two main precepts and, as you all know, you cannot absorb the knowledge of how to be a true brother unless you are truly educated.

True brotherhood is perhaps the only way to end the constant threat of war which the human race has faced for thousands of years. In order to understand the concept of brotherhood, people must become educated; their minds must be developed so that they can acquire a capacity to think beyond their own small personal world.

I find it particularly difficult to talk on these abstruse matters after so many fine speeches, but I will give you some brief statistics:

For the past seven years, the Russians have been graduating more scientists and engineers than we have. Last year, for example, they graduated 40 per cent more than our country. By 1961, they will be graduating 200,000, or about 70,000 more than America. The picture is even grimmer than these numbers indicate because, since 1957, the Russians have topped us in total number.

In 1957, they had about 1,500,000 and we had 1,330,000. But this doesn't tell the whole story. Of their 1,500,000, a very high percentage were doing

scientific and engineering work, while in this country many of our people go into administrative and other non-technical jobs soon after leaving college.

In addition, their scientists and engineers are, to a considerable extent, better educated than ours. A far larger percentage have advanced degrees such as Doctor of Philosophy.

The Central Intelligence Agency estimates that in 1961, Russia will have about 25 per cent more scientists and engineers than we.

Now, what do these figures really mean? Does it actually make much difference if somebody else has more scientists and engineers than we? Well, people might say, "If we had more, we'd be stronger and there would be less chance for war."

It is certainly true that one of the surest ways to maintain peace is to remain militarily strong. But there are two other reasons why our lag in education should concern us. One reason is that quite apart from Russia's military threat, we must not lose sight of the struggle on the economic front. Even if a fighting war were no longer a possibility, there would still be an economic cold war that might last for generations. Don't forget that the Russians are determined to beat us in everything. They have surpassed us in education and in some military developments and as Khrushchev has made quite clear, they are going all-out to surpass us in industrialization. Some people feel this will never happen; I am more pessimistic and feel we will maintain our lead for at least 15 or 20 years.

Bear in mind that their economy is growing at the rate of about $9\frac{1}{2}$ per cent a year for the past 10 years compared to an average of about 4 per cent in America. It is these rate of growth figures which are significant--not so much the actual status at this time.

Now all this industrialization would not have been possible without educated people. The recent products of Soviet industry are nothing more than the fruitful results of years of government sponsored research and training. Their newer factories are quite as impressive as our own widely-acclaimed production lines.

If we are to maintain our current superiority in industrialization, it is evident that our educational system must be improved.

The second reason why we should be concerned with our educational deficiencies is that education is a good thing in itself. It is good for the individual and good for the country.

The importance of education was recognized as far back as 500 B.C. when Aristotle said that "the primary obligation of any legislature is the education and the training of its youth." This is the quotation I am constantly repeating to Congressional Committees. Any nation that neglects education has already joined the ranks of the defeated.

This is why I urge all of you to do everything you can to help improve our schools.

If you want to see for yourselves just how wide a gap exists between the educational level of the Russian student and his American counterpart, Mr. Montgomery mentioned a little booklet that includes a complete set of examinations which 17 year old Russian children have to pass when they finish high school. The amount of knowledge required to pass these examinations will rarely be possessed by American youth unless they have had two years of college. I suggest you

give these examinations to your own children and show them to your teachers and school boards. Don't let them give you the usual prattle that you can't compare a democratic with a totalitarian system. The exams cover algebra, chemistry, physics, languages, etc. These subjects have nothing to do with ideology.

I would like to make one more point on our school system. American educators are always lauding the "democracy" of our educational system. Only yesterday I received a newspaper clipping from a New Mexico newspaper. Later this month I am making a speech there and it happens that the educators of that state are meeting on the same day; they have protested to the newspapers and to the Chamber of Commerce that my presence at that time is unfair.

Now, this is a fine example of living "democracy." The horrible thing about this is that these educators don't really recognize what they are doing. In spite of all their talk about democracy, they don't even know what the word means.

I hope you didn't mind sitting through these rather serious remarks of mine, but as you can see, the matter of education is of deep concern to me. I sincerely believe that you can do nothing more to demonstrate your love of our country and our children than by doing all you can to bring our educational system back to what it should be.

(Applause)

BROTHER LORD: The Admiral has consented that if anyone has a question to ask him on education, he will answer it.

A VOICE: Admiral Rickover, can you tell me is it true that all students in Russia have free tuition and are wined and dined and given all accessories on the cuff; is that so?

ADMIRAL RICKOVER: Well, they don't wear cuffs and they don't get wined, but outside of that, what you said is true. Perhaps I could elaborate a little bit on that.

Their basic school system, except in small country towns, is a 10-year system. This is a system comparable to that in use in Western Europe for more than a century. In small towns, Russian students normally have only seven years of schooling, but even these students know more than most of ours do when they graduate from high school.

All tuition is free in Russia; university students are actually given expense money, roughly as much as a skilled worker gets.

I visited some of these Russian schools and talked with Mr. Khrushchev about education, so I am talking firsthand.

A VOICE: May I follow it up with a question? Are they obligated to stay until they graduate?

ADMIRAL RICKOVER: No, they aren't actually forced to graduate. But every Russian student knows that if he fails at school, there will be nothing but a drab life of hard labor ahead. On the other hand, a university graduate is "fixed" for life. This acts as a powerful incentive and explains why Russian students study so hard.

A VOICE: Can you tell me if the Russians have any different teaching methods than we have?

ADMIRAL RICKOVER: Perhaps the most important difference between Russian teaching and our own is that Russian teachers are expected to know the subject they are teaching--they are not as concerned with teaching method.

In Russia, or in any other European nation, you would certainly not find secondary school students taught by teachers who have spent almost all their

time absorbing the technique of teaching and a bare minimum devoted to the actual subject they are teaching. This is exactly the situation that prevails in our own public schools.

One reason why the Russians don't have to put up with this sort of a situation is that they have nothing corresponding to our propaganda organizations such as the National Education Association, admittedly a lobbying organization that effectively controls our school systems and goes to great pains to prevent criticism from within and without. I have received many letters from teachers--some who don't dare sign their names--who are disgusted with the stranglehold professional educationists have over our schools but who are afraid to criticize for fear of what will happen to them.

BROTHER SCHOONMAKER: Admiral Rickover, can you answer something that has been bothering me?

In our public school system, we have 10 days off at Christmas and a week off at Easter and three months off in the summer. Hours from 9-3:30, we have the afternoons off to watch a football team, and when the teachers have a convention, they close the school for three days in my home town.

Do they do anything like that in Russia?

ADMIRAL RICKOVER: Russian students go to school 10 months a year, six hours a day, six days a week. As a matter of fact, the Russians spend somewhat fewer hours at school than most other Europeans.

The average number of school days in Europe is around 240 days. Denmark has a school year of 280 days as compared with 180 in America. Danish children go to school six hours a day, six days a week and have three to four hours of home work a night.

Some American educators claim that this would be dangerous to the children's health--that they would be overworked. But don't forget the Armed Services of the United States have the greatest percentage of physical misfits of any country in the world.

Before you can make our children go to school as long as they do in Europe, you have to get their parents behind the idea. You can't preach one thing for the children and do another yourself. How can a parent who wants to go on a vacation one month a year and work four or five days a week expect his children to go to work six hours a day at school and study another four at home, six days a week, 280 days a year. That would obviously interfere with the family vacation.

(Applause)

BROTHER HICINBOTHAM: Can you tell us, Admiral, if there are any private schools in Russia or are there any schools under the control of the Government?

ADMIRAL RICKOVER: The only private schools are the graveyards.

(Applause and laughter)

A VOICE: Admiral Rickover, do they promote everybody in the institution of higher learning whether they deserve it or not?

ADMIRAL RICKOVER: No, they give tough examinations such as the one I spoke about earlier. About 30 per cent of their high school graduates go on to a university. This is quite an improvement because until 50 or 100 years ago only about four or five per cent were educated at all. That was all that was necessary to maintain an agricultural society.

The only way for advancement in Russia is through education. The Russians send their best people to school while we in the United States let many of our

top students go right to work after high school--either because they can't afford to go to college or because they don't consider a college education very important. The American student knows he can make a good living without a college degree--the Russian student knows he cannot.

A VOICE: Are the other systems of education in Western Europe comparable to the Russian system?

ADMIRAL RICKOVER: The Russian school system is not nearly as hard or thorough as others in Western Europe.

A 15 year old in Holland and Switzerland could pass examinations that a 17 year old Russian student does or that a 20 or 21 year old could in the United States.

A VOICE: I have one more question.

Are the colleges of Western Europe, do they all have free tuition for their students?

ADMIRAL RICKOVER: In most European countries they are free, or practically so. In Holland, for example, the maximum one has to pay for going to the university is around \$75 a year.

This is something we don't generally understand. We all think that free elementary education started in the United States. It did not. In fact there was free elementary education in Germany after the Protestant Reformation. The reason at that time was that under Catholicism, nobody except a Priest had been allowed to read the Bible. Luther and his followers wanted to spread the words of the Bible among the people. Consequently schools were started to permit all the people to learn how to read and write their own language.

There was compulsory elementary education in parts of Prussia in 1717

and free education by 1794. By 1882, many European countries had compulsory elementary education.

Apart from scattered pre-Revolutionary efforts to make education compulsory, we had the first compulsory education law in Massachusetts in 1852 and this required only 12 weeks of schooling per year and only for ages 8 to 14. By 1889, some 25 states had some form of compulsory education but it was effective only in two--Massachusetts and Connecticut. The last compulsory attendance law was enacted by Mississippi in 1920.

Our sluggishness in education shows up in the fact that we still have 10 per cent functional illiterates--individuals who cannot really understand what they read. In Germany they stopped giving literacy tests more than 50 years ago because only a small fraction of one per cent couldn't read and write.

The Communists, in spite of all their bad qualities, could recognize a good thing when they saw it. After some fruitless experiments with the progressive and permissive educational system of Dewey, they quickly saw the harm it was doing and remodeled their schools after those of Western Europe. They still haven't caught up--but we don't even try.

A VOICE: Admiral Rickover, is the educational problem that confronts us one that could be treated locally or is it one that must be treated nationally to uniformly raise the educational standard throughout the nation and what can we do about it?

ADMIRAL RICKOVER: Well, in every country that has had any success with improvement of its school system, they have had to set up a standard. Now, we have some 57,000 individual school boards in the United States--I doubt that all of them could agree on a single standard. I feel a national standard

would be the best. State standards would do some good too.

With a national standard, each community could judge for itself just how well its schools were training their children. Right now, it is difficult for a parent to fight through the layers of educational bureaucracy and find the truth about his child's school.

We have nothing comparable to the nation wide examinations. You can bet that if the students from a particular school were doing poorly on one of these examinations the parents and the community would kick up such a fuss that the situation would be immediately remedied.

Though this would involve a federal standard that is not obligatory, many people see in it federal control and reject it for this reason. We like the idea in America of having each community control its own schools. But don't forget that in most states, the local board is legally considered an agency of the state and not an independent organ. Moreover, in actual practice board members rarely have the power to exert as much influence on curricula and teacher qualification as the so-called "professional educators"---that is, the men who administer public education and teach in departments of education and teachers colleges. These "professional educators" have set up a "closed shop" for teachers, and often insist that each student take a heavy dose of "life-adjustment" subjects. Little is said about the academic subjects.

In closing, I would like to say that there is no greater duty you can do for our country than to help improve our schools.

I have devoted almost every spare minute of my private life to the problem for the past 10 years. Perhaps I can convey some of my concern to you. I hope you won't dispose of the problem by saying "He made a nice speech."

I would be pained and hurt if I thought that this well-to-do audience had no desire to provide a decent education for their children. God knows none of us would be as well off anywhere else in the world.

I am merely trying to repay in some slight amount what this country has done for me. I hope I can convey that same feeling of gratitude and urgency to you. If I have succeeded in doing that for some of you, my coming here will have been well worthwhile. Thank you.

(Applause)

CONVENTION CHAIRMAN LORD: Again, Admiral Rickover, may I thank you for your interesting and educational treat. This has never happened to us before, that our guest of honor has asked this large audience "Are there any questions?" and answered them so simply and plainly.

I believe you would also be interested in a book written by Admiral Rickover, "Education and Freedom," published by E. P. Dutton & Co., Inc., New York. It contains his views on our education problem and other related matters.

We have now come to the conclusion of the ceremonies and we--may I again thank our distinguished guest for being with us.

We are the ones that are honored.

(Applause.)