

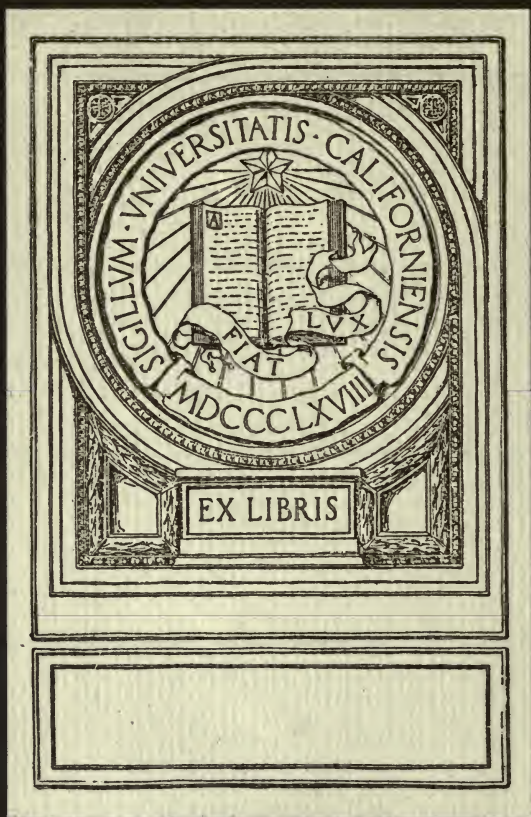
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CONFIDENTIAL

# Report of Conference

Held at Washington, D. C.  
on May 19, 1919

between

Shipbuilders from Great Lakes,  
Atlantic and Gulf Coast Districts

and

United States Shipping Board  
Emergency Fleet Corporation



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CONFERENCE BETWEEN SHIPBUILDERS AND U. S. SHIPPING  
BOARD EMERGENCY FLEET CORPORATION.

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WASHINGTON, D. C., *May 19, 1919.*

Morning session convened at 11 a. m., recessed 1 p. m. After-  
noon session convened at 2.30 p. m., adjourned at 5.35 p. m.

Present, representing United States Shipping Board Emergency  
Fleet Corporation:

Messrs. Edward N. Hurley, president; R. B. Stevens, vice president;  
John A. Donald, vice president; J. H. Rosseter, director of operations, trustees.  
J. L. Ackerson, vice president; I. A. Campbell, admiralty counsel; James V.  
Converse, assistant secretary.

W. C. Ward; H. V. Amberg; H. C. Sadler, naval architect; P. S. Tyre, staff  
assistant to Vice President Ackerson.

Present, representing shipbuilding companies:

American International Shipbuilding Corporation, Hog Island, Pa. Brush,  
M. C., president.

American Shipbuilding Co., Cleveland, Ohio. Davison, J. E., vice president;  
Kelley, H. A., general counsel; Smith, A. G., operating manager.

Atlantic Coast Shipbuilding Co. Carroll, J. B., assistant secretary.

Atlantic Corporation, Portsmouth, N. H. Proskey, W. Scott, vice president.

Baltimore Dry Dock & Shipbuilding Co. Evans, H. A., president; Willis, J. M.,  
vice president and general manager.

Bayles Shipyard (Inc.), Port Jefferson, Long Island. Smiley, J. B., president  
and general manager.

Bethlehem Shipbuilding corporation (Ltd.), Wilmington, Del. Smith, H. G.,  
manager.

Carolina Shipbuilding Co., Wilmington, N. C. Dilke, F. C., president.

Chester Shipbuilding Co., Chester, Pa. Smith, W. T.

Wm. Cramp & Sons Ship & Engine Building Co., Philadelphia. Mull, J. H.,  
president.

Doullut & Williams Shipbuilding Co., (Inc.), New Orleans, La. Doullut, M. P.,  
president.

Downey Shipbuilding Corporation, Staten Island. Downey, W., president.

Globe Shipbuilding Co., Superior, Wis. Cooke, B. C., president; Massey, C. A.,  
vice president.

Great Lakes Engineering Works, Detroit, Mich. Pessano, Antonio C., chairman  
of board of directors; Russel, J. R., president.

Groton Iron Works, Groton, Conn. Morse, E. A., president; Morse, C. W.

Los Angeles Shipbuilding and Dry Dock Co., Los Angeles Harbor. Napthaly,  
Sam L., vice president and general manager.

McDougall-Duluth Co., Duluth, Minn. McDougall, A. M., president.

Manitowoc Shipbuilding Co., Manitowoc, Wis. Geer, T. E., secretary and  
treasurer; McClellan ———; Nash, A. T., auditor; West, Charles C., vice  
president and general manager.

Merchant Shipbuilding Corporation, Bristol, Pa. Smith, W. T., vice president.

Newport News Shipbuilding & Dry Dock Co. Gauntlet, T. J., Washington  
representative.

Oscar Daniels Co., Tampa, Fla. Sadtler, Edwin B., consulting naval architect.

Pensacola Shipbuilding Co., Pensacola, Fla. Soule, F., second vice president  
and general manager.

Standard Shipbuilding Co., Shooters Island, N. Y. Dickerson, H. L., auditor;  
Hunter, H. C., secretary.

Saginaw Shipbuilding Co., Saginaw, Mich. Stiner, C. W., naval constructor.  
 Submarine Boat Corporation, New York City. Carse, Henry R., president.  
 Sun Shipbuilding Co., Chester, Pa. Haig, Robert, vice president; Pew, John C., president.  
 Terry Shipbuilding Co., Mobile, Ala. Brittain, H. L., vice president.  
 Toledo Shipbuilding Co., Toledo, Ohio. Calder, Charles B., vice president and general manager; Wilkinson, H. S., president.  
 Virginia Shipbuilding Corporation, Alexandria, Va. Morse, C. W., director.

Present, representing shipbuilding companies:

Brittain, H. L., vice president Terry Shipbuilding Co.  
 Brush, M. C., president American International Shipbuilding Corporation.  
 Calder, Charles B., vice president and general manager Toledo Shipbuilding Co.  
 Carroll, J. B., assistant secretary Atlantic Coast Shipbuilding Co.  
 Carse, Henry R., president Submarine Boat Corporation.  
 Cooke, B. C., president Globe Shipbuilding Co.  
 Davison, J. E., vice president American Shipbuilding Co.  
 Dickerson, H. L., auditor Standard Shipbuilding Co.  
 Dilke, F. C., president Carolina Shipbuilding Co.  
 Doullut, M. P., president Doullut & Williams Shipbuilding Co. (Inc.).  
 Downey, W., president Downey Shipbuilding Corporation.  
 Evans, H. A., president Baltimore Dry Dock & Shipbuilding Co.  
 Gauntlet, T. J., Washington representative Newport News Shipbuilding & Dry Dock Co.  
 Geer, T. E., secretary and treasurer Manitowoc Shipbuilding Co.  
 Haig, Robert, vice president Sun Shipbuilding Co.  
 Hunter, H. C., secretary Standard Shipbuilding Co.  
 Kelley, H. A., general counsel American Shipbuilding Co.  
 McClellan, ———, Manitowoc Shipbuilding Co.  
 McDougall, A. M., president McDougall-Duluth Co.  
 Massey, C. A., vice president Globe Shipbuilding Co.  
 Morse, C. W., director Virginia Shipbuilding Corporation and Groton Iron Works.  
 Morse, E. A., president Groton Iron Works.  
 Mull, J. H., president Wm. Cramp & Sons Ship & Engine Building Co.  
 Naphaly, Sam L., vice president and general manager Los Angeles Shipbuilding and Dry Dock Co.  
 Nash, A. T., auditor, Manitowoc, Wis.  
 Pessano, Antonio C., chairman of board of directors Great Lakes Engineering Works.  
 Pew, John C., president Sun Shipbuilding Co.  
 Proskey, W. Scott, vice president The Atlantic Corporation.  
 Russel, J. R., president Great Lakes Engineering Works.  
 Sadtler, Edwin B., consulting naval architect Oscar Daniels Co.  
 Smiley, J. B., president and general manager Bayles Shipyard (Inc.).  
 Smith, A. G., operating manager American Shipbuilding Co.  
 Smith, H. G., manager Bethlehem Shipbuilding Corporation (Ltd.).  
 Smith, W. T., vice president Merchant Shipbuilding Corporation and Chester Shipbuilding Co.  
 Stiner, C. W., naval constructor Saginaw Shipbuilding Co.  
 Soule, F., second vice president and general manager Pensacola Shipbuilding Co.  
 West, Charles C., vice president and general manager Manitowoc Shipbuilding Co.  
 Wilkinson, H. S., president Toledo Shipbuilding Co.  
 Willis, J. M., vice president and general manager Baltimore Dry Dock & Shipbuilding Co.

Mr. HURLEY. Gentlemen, at a recent meeting of the board of trustees of the Emergency Fleet Corporation it was decided to extend to all the shipbuilders on the Atlantic coast and the Great Lakes an invitation to attend a conference with the members of the board and the officers of the corporation, with the thought in mind of having a round-table discussion as to the various points referred to in my recent letter to the companies with which the corporation has contracts, and to consider ways and means to continue the shipbuild-

ing industry along sound, practical, commercial lines, to compare notes, and endeavor to solve the problems with which we have to contend in connection with the shipbuilding program, and to receive suggestions from you as to the operation and ownership of our merchant marine, and as a result of this meeting we hope to receive many beneficial ideas to aid us in arriving at a definite conclusion.

We have been working under war emergency conditions, and perhaps for that reason the point of contact has not been as close as we, the trustees, have desired; however, everything that was done during the past two years has received our approval and we indorse the actions of our former representatives. With the cessation of hostilities, however, we faced new conditions, and one of the objects of this meeting is to acquaint you with the situation confronting the board with regard to securing funds from Congress to proceed with the shipbuilding program, which funds have heretofore been authorized but not appropriated. We are going to recommend the building of ships larger than those built under war conditions, but obviously we can not appear before the Appropriations Committee and urge the appropriation of money to construct ships at the high prices which prevailed under war conditions. We must present specific information as to the cost of construction of the new types of ships we will recommend. With that thought in mind, and the fact that we have contracts for a number of ships, the keels of which have not yet been laid, all of which were contracted for under war conditions, we thought you gentlemen—who are so vitally interested in the future of the shipbuilding enterprise—should be advised of the conditions confronting the board, and we hope as a result of this conference and at which we exchange views to incorporate some definite recommendations in the plan the Shipping Board will present to Congress. The Congress is not going to grant appropriations as quickly as heretofore and we can not and should not expect them to do so. The congressional committees will demand figures as to the cost of ship construction which, under war conditions were not available or could not be complied without great loss of time. We are planning to ask for approximately \$690,000,000; we were authorized by Congress to spend \$3,671,000,000. We are now within the amount authorized. That is, we have not gone beyond these figures, but we do want to present, when we are asking for an additional appropriation, some definite data as to the cost of the ships the keels of which have not yet been laid. We desire your cooperation and the benefit of your advice and views, so that the plan presented by us to Congress will include the views of the experienced shipbuilders as well as the board. I am going to ask Mr. Stevens to make a few remarks, also Mr. Donald, and when any gentleman addresses the conference, or when you stand up during the hearing—we are going to be in session all day, so that we may have a free and frank exchange of views—you are requested to announce your name and that of the company you represent so that the stenographer will have all the facts, and I want each gentleman present to feel that the board desires a candid expression from each man. We want the facts, and if we do not get them we will be seriously handicapped, so do not hesitate to interrogate us; we are seeking information and we are going to ask you questions, so do likewise with us.

Mr. STEVENS. The main purpose of this meeting is to discuss with the shipbuilders in what way the cost of ships, where the keels have not yet been laid down, may be reduced in order to justify the board in asking Congress to appropriate the necessary money to complete these contracts. Now that the war is over, we have to justify that demand for more appropriations, not by war conditions and war needs, but by peace conditions. During the war revisions and changes in contracts were made to meet emergency conditions, and the trustees of the Emergency Fleet Corporation were in hopes that now the war is over it might be possible to secure some revision of the contracts where the keels are not yet laid down, so that the ships when built might cost somewhere nearer what their value will be in world competition than they would under the original contracts. That is, as I understand it, the chief purpose of this conference, and we want to get directly from the shipbuilders, before any definite plan is adopted by the trustees, their point of view and their suggestions on this matter, which of course is so vital to them.

Mr. DONALD. It seems to me, gentlemen, that the indefiniteness of the contract that we have, as to cost, is something that we are going to be held very strictly accountable for by this Congress which is meeting now, and I think if you gentlemen can address yourselves to getting a lump-sum price, instead of a cost-plus contract, that that is a thing which will go very far toward establishing yourselves in the eyes of Congress, and that is a matter which we ourselves would like to see as being the proper thing to do in this crisis. I think that now that you gentlemen have had the experience of two years of building ships, you ought to come very near getting the costs as to what you are going to build the ships for. Practice brings perfection, and you are going to do better, I think, in the future, in building ships than you have done before. Now, you must have some definite idea as to what the cost of building the ships will be, and I can only urge you to meet the views of Congress as much as possible in bringing the price to a lump-sum basis which you will be able to go ahead for, and we are anxious to see you get the contracts on that basis.

We have to keep the shipbuilding industry going in this country. You gentlemen have large sums of money invested in it; many of you have made large sums of money, and I would appeal to you to do the best you can to meet the present conditions. We know you have all made money, and it has come around that way, and I would like to see a lump-sum contract as a substitute for the condition under which we are working now. I do not think I have anything else to say at this time.

Mr. HURLEY. The board appreciates the necessity of the shipbuilders making money, and in outlining your plans, we are particularly anxious that the margin should be safe and sound, both from your point of view and the workmen's. We do not, however, want to get into a discussion, in any way, which might involve the reduction of wages.

It is our idea to increase efficiency and by so doing reduce the cost of shipbuilding, which will be good for the yards, good for the country, and good for the Government.

The embargo against building steel vessels for foreign account, as you know, gentlemen, has been lifted by the President, so long as



it does not interfere with the building program of the American merchant marine. It is our idea, however, that all contracts negotiated by you for the construction of ships for foreign account should clear through the Shipping Board, as a matter of record. I think we can be helpful to everyone of you in getting some foreign contracts, but we are very anxious, when you make your bid to a foreign purchaser, when the deal has developed to such a point, that before closing your transaction you consult with the trustees of the Emergency Fleet Corporation and Shipping Board and keep in touch with them; the information you give us will be considered confidential and will not be distributed, and your competitors will know nothing about it. While negotiations are going on we are not particularly keen that you should advise us what you are doing, but when the matter comes to the point where the deal will be closed, we ask that before finally closing you consult with the Shipping Board and receive its approval.

Now, there are two foreign governments planning to place orders in this country. They have negotiated for about 1,500,000 of shipping. I do not know just what has developed during the past few weeks, but we will have, within a few days, definite information as to the type and style of ship they require, and about the price they want to pay. If we can get a line on the prices that you gentlemen can build ships for of certain sizes and types, it is going to be very helpful to us in closing negotiations. For example, who represents the Great Lakes here?

Mr. TYRE. All the Great Lakes companies are here.

Mr. HURLEY. How many of them are here?

Mr. TYRE. Seven.

Mr. HURLEY. How many keels are there to be laid on the Great Lakes out of the seven companies?

Mr. TYRE (reads). "Keels to be laid, after May 15, 65—dead-weight tonnage, 263,000."

Mr. HURLEY. Well, that is one of the localities in which we are particularly interested. First, on account of the large number of the Lake boats we have on hand, and, second, the fact that we can not substitute a large type ship for any cancellations that may be made, so that if the Great Lakes people will get together and give us a revised flat price, we may be able to transfer the contract to some foreign Government and have the entire number of ships contracted for built. I do not know how you gentlemen work together on these things, but I presume the contracts were practically the same with all the seven shipbuilders on the Great Lakes.

Mr. ACKERSON. It was fixed at \$180 and \$20,000 for military requirements. I think it is a flat \$200,000.

Mr. HURLEY. What are the ships costing us now?

Mr. PESSANO (of the Great Lakes Engineering Works). About \$190,000.

Mr. HURLEY. Well, if we were to cancel the laying of the keels, and get a substitute which we could sell at a pretty fair price, couldn't you gentlemen work out some plan whereby that could be reduced, so that we could make a sale without the Government losing the difference? If we continue to build, we know that we have to sell them. A foreign government would not pay this sum.

Mr. PESSANO. Mr. Chairman, speaking for the Great Lakes Engineering Works, we have all of our keels down now, with the exception possibly of six, and for these six the materials are very well advanced. I would say, in a number of detailed instances, the materials are 100 per cent out and ready for installation as soon as the hull has been launched. It must be taken into consideration that, as far as our company is concerned, we have not had one dollar from the United States Government or from the Shipping Board or from the Emergency Fleet Corporation, and that we have paid for the vast improvements that were made, and which were made—I was going to say, as a suggestion, but I will put it in other words, in the terms of an order—Commander Ackerson was the only gentleman present representing the Emergency Fleet Corporation. That meeting was held on the 20th day of May last year, in Cleveland, and we were told then that we should reduce our prices, which we did.

Mr. HURLEY. What were you getting before that?

Mr. PESSANO. I had made contracts before that as high as \$875,000.

Mr. HURLEY. How much is that a ton?

Mr. PESSANO. That ran about \$225 a ton. We reduced our prices, due to the fact that we had gone on and made improvements and spent our money and learned to do things quickly. We reduced our prices to a basis, including military equipment, of \$800,000. We accepted \$800,000 for these ships and then agreed to spend all that money—

Mr. HURLEY. How much money did you spend?

Mr. PESSANO. Over two and a half million dollars.

Mr. HURLEY. How much a ton deadweight are you getting now?

Mr. PESSANO. At the present time, about \$190. We have had the question of cancellation up. In other words, we have completed our contracts, Mr. Hurley. We were running six months ahead of time. We would have completed everything by the latter part of July, when the armistice came on, and it was a question of readjustment by the board, and we took it up with Mr. Schwab and Mr. Piez—and Mr. Donald is familiar with the facts, I came to see him in your absence—and it was decided then, as a matter of good policy, in the interest of the employees, that instead of going on at the rate we were going, we should slacken up; keep the employees at work, reducing their hours and stretching our contract to the point where it called for completion, which was the 15th of November. We will complete the contract by the 15th of November, although we would have completed it in July, if we had not followed the policy of the President. I know it was your policy, as expressed by Mr. Donald, to do everything we could to keep the shipbuilders at work. All the shipbuilders of the Lakes followed that out. I think the American Shipbuilding Co. would have completed their contract well in advance of the obligation. I think one or two of the smaller concerns have fallen behind there, but the great majority would have been finished in time.

Mr. HURLEY. Don't you think that was a wise policy?

Mr. PESSANO. Patriotically speaking, yes.

Mr. HURLEY. From a business standpoint it was not good policy to continue on the lines we were working on during the war. You could not have proceeded as economically under that policy as you could under a sane, orderly procedure.

Mr. PESSANO. I don't quite agree with you, Mr. Hurley. I tell you right here; we had the right, as shipbuilders, to expect that freedom of trade was going to follow in the shipbuilding line, as it was in other lines of trade, and the shipbuilders naturally looked for the embargo to be lifted with respect to contracting with foreign countries for ships. I had that under discussion with Commissioner Donald, and he quite agreed with me. Mr. Piez agreed with me, in your absence, and I think a cable was sent asking that that be done.

I had a contract with the French people for 10 ships, terms agreed to and prices exactly the same as the Shipping Board would pay. They agreed to that—they agreed to the terms of the contract, which was more along commercial lines. When I speak of it as "commercial," I mean in line with what we do commercially rather than what we do with Government contracts. Now, that was agreed to when the thing was thrown in the air by reason of the gentleman's request which came from Paris to suspend further negotiation.

Mr. HURLEY. It was never suspended; it was never authorized. The law prevents that.

Mr. PESSANO. We knew nothing about that up to that time—that we would not be permitted. When the Shipping Board itself said to us, "We have no further business to give you," we said to them, "We will be out of a job, and we will need steel to lay new keels along about in May."

Mr. HURLEY. How many new ways did you put in your yard?

Mr. PESSANO. We just about doubled up. We added five new ways.

Mr. HURLEY. How many ways have you got altogether, ten?

Mr. PESSANO. We have eleven.

Mr. HURLEY. So that the war ways are five. Your old ways were six?

Mr. PESSANO. Yes.

Mr. HURLEY. You spent two and one-half million dollars for five ways and machinery?

Mr. PESSANO. Not for five ways, but for the necessities. We had our engine plant and everything that went with it.

Mr. HURLEY. That is the amount of money you spent for war purposes?

Mr. PESSANO. The money we spent for war purposes was two and one-half million dollars, and we see no way of getting that back unless we are reimbursed through commercial contracts which will give us a fair price. If we are not to get these commercial contracts, that is all scrap to us, and we would have never done it, Mr. Hurley. Mr. Donald knows that, and Commander Ackerson knows it. We would not have spent that money if it had not been for certain assurances given us in the event that we got into the game and just doubled our output, in other words, gave you just double the tonnage we had previously agreed to give you at a reduced price. Otherwise it certainly would not have been the part of business wisdom to jump in. It was on the request of Mr. Schwab. We were urged as were all the builders—"man to man." We were urged to get in and build these ships. Of course, it is true—it may be said truthfully, in other cases and in the case of every other shipbuilder, excepting the company I am representing, and for whom I am speaking, companies were allowed if I recollect, about two-thirds of

their total cost of plant improvements, but in the case of the Great Lakes Engineering Co., while it was offered to us, we said: "Under the circumstances we will contribute all that money." Our stockholders had to go down in their pockets and pay that money. That money came out of pre-war contracts. We have not made any money yet, because the first contracts, the present contracts, are the only contracts we have had. We have not completed them yet. I do not know what the cost will be. We do know, however, that our costs are running very much higher.

Mr. HURLEY. Now?

Mr. PESSANO. Yes, sir.

Mr. HURLEY. Not as high as they were during the war; you have increased efficiency.

Mr. PESSANO. Yes; except, if you count out overtime work——

Mr. HURLEY. That is an important part of the cost.

Mr. PESSANO. You pay for that.

Mr. HURLEY. Do I understand that it is costing you more?

Mr. PESSANO. Yes, sir.

(Mr. Hurley left the meeting at this point.)

Mr. STEVENS. As Mr. Hurley outlined and as I suggested in the few remarks I made, the board feels that there is some possibility in view of the desire on the part of Congress to reduce expenditures and cut off war expenditures, that there is a possibility and perhaps a probability that Congress will refuse to appropriate the money necessary to complete ships the keels of which have not yet been laid down, and it will certainly greatly strengthen the board's position if it is able to report to Congress that the readjustment of these contracts has been taken up and some readjustments and reductions are possible. I would like to ask Mr. Pessano if he thinks it is possible for shipbuilding companies on the Great Lakes to make any proposals for the ships which are not yet laid down, which will reduce the cost of these ships.

Mr. PESSANO. Mr. Stevens, I can not speak for the shipbuilders on the lakes. We had no intimation of what was to come before this meeting, and the shipbuilders have therefore not conferred, but I can say to you they had already reduced their prices when they took their last contracts. They reduced their prices then, and in our special case it is still further reduced by the fact that we spent all that money—\$2,500,000. We just doubled our capacity in 1919, which I already said we were doing, and were running six months ahead of our schedule, and I would say that that would be a matter that would have to be well considered by the lake builders, but, speaking for myself, I see no possibility of our reducing our figures still further without endangering our own conditions. We have no real data before us yet, and will not have until these ships are completed, but we do know our costs are daily running higher.

Mr. STEVENS. Higher now than during the war?

Mr. PESSANO. That may sound strange to you——

Mr. STEVENS. It does.

Mr. PESSANO. In the first place, eliminate the overtime business. That was an extraordinary war-time condition, and did not concern us, because the Shipping Board was paying it. I am speaking of the basic contracts. We are surrounded by conditions today, due

to more exacting instructions, and due to different annoying things—I will put it that way—that come up from day to day, which causes us a very large amount of expense, where we have to do this and do that and do the other thing, all of which we would not commercially be subjected to, and all of which we were largely not subjected to during the war. I can appreciate the feeling of the Fleet Corporation and the sentiment of the technical department, and their desire to have these ships, now that there is not such a great rush to have them, built more exactly in line with the specifications, and there are some details which were not considered in the specifications, not even dreamed of, all of which we have acquiesced in, and in a great many instances allowed without asking recompense. When you take that into consideration, with respect to our own company, I see no way of reducing that which has already been heavily reduced.

The labor question, of course, is another question. We have taken the position from the beginning that we should go on and pay the same wages, make no attempt to sidestep or go around in any way, but to maintain the wages set up by the Macy scale, and we intend to do it. We do know, however, that there is a very strong feeling among the men with respect to the uncertainty of the whole situation. That feeling has been brought about unfortunately, more or less, by the published statements put out through the press over the entire country to the effect that there were going to be cancellations throughout the entire country. It has the labor element stirred to the limit, and the result is—if you knew labor as I do you will know—when such a feeling gets among them that your efficiency suffers, and that is what is costing money—lack of efficiency. Regardless of all we can do to bring up the efficiency, all we can do to bring it up is offset by the public statement made in the press with respect to the cancellations. All the other lake shipbuilders are here, Mr. Stevens; they can speak for themselves.

Mr. STEVENS. It certainly would be the best thing for the industry on the Great Lakes to get all the work it could, and continue these contracts, both from the company's point of view and labor's point of view, but with the possibility of not having money to finish these contracts which are not yet laid down it seems desirable, to say the least, that the companies on the Great Lakes should work with the Shipping Board in every possible way to reduce the price of these ships. Of course, if it absolutely can not be done we will have to so report to Congress. Who else is here representing the shipbuilders on the Great Lakes? (Is Mr. Smith of the American Co. here?)

Mr. A. G. SMITH (of the American Shipbuilding Co.). I would refer that matter to our vice president, Mr. Davidson.

Mr. KELLEY (of the American Shipbuilding Co.,) Mr. Davidson has asked me to speak. I can only say that Mr. Farr, the president of our company, is in Europe, and he has personally attended, not only to all of the negotiations connected with our shipbuilding contracts, but has personally made the figures on which these contracts were based. In his absence it would be out of the question for those now in charge of the company to even intimate, in any positive way, what we could do or would be able to do. Mr. Farr is expected to

sail for this country very shortly. We expect him probably before any definite action will be necessary, and I feel—I am quite sure—from some conversations I have had with him before he left, it would be his disposition to cooperate in any way possible with the board in making any savings which are in the range of human possibility. We have succeeded in increasing very largely the efficiency of our plant and in some ways have even surprised ourselves in that respect.

You are familiar, I believe, with the form of our present contracts, and they make it certain the board will get the benefit of every possible economy we can put into effect. As to definite figures, I must ask the board for time enough to consult with Mr. Farr as soon as he returns, and I will be very glad to take it up with you again, and I hope it will not be too late for your conference with Congress. I assure you Mr. Farr will give it his attention as soon as he lands.

Mr. STEVENS. Of course, we did not expect to arrive at any definite figure here to-day. Is it costing your company more to build ships now than it did before the armistice was signed? Do you find the same conditions confronting you that Mr. Pessano finds?

Mr. A. G. SMITH. Our costs are running up, due to a great many circumstances.

Mr. STEVENS. You say costs are running up over what they were before the armistice?

Mr. A. G. SMITH. Yes; due to the fact that a number of the items mentioned by Mr. Pessano enters into it, and another one, that he failed to mention, and one which has a large bearing on the matter. The fact of the reduction from 10 to 8 hours brings into the 8-hour period the same number of lapses that occurred in the 10-hour period. We have the same period of stoppage at lunch time and at quitting time in the 8-hour period that we had in the 10-hour period, and this gives us a greater percentage of loss in the 8-hour period than it did in the 10-hour period. It has a very large bearing on the increased cost.

Mr. STEVENS. Is Mr. Calder here, of the Toledo Shipbuilding Co.?

Mr. CALDER. Mr. Wilkinson, our president, is here. He will speak for us.

Mr. WILKINSON. I seem to be called in here very frequently.

Mr. STEVENS. You come voluntarily sometimes.

Mr. WILKINSON. Yes; once in a while. Well, I think, gentlemen, that there is a great deal to say about this matter. We have had no time for any discussion among the various men on the lakes, because this question has been entirely a new one, and we had no idea of getting together. There is no doubt but that we should get together to know what the conditions are.

Now, it is hardly fair to assume that the conditions are the same in our plant, and that the same conditions could prevail in all plants. I think that there should be a fairness existing between the board and the shipbuilders on the lakes, as well as in other parts of the country. Now, there are concerns that began early to increase their facilities to assist in the carrying out of the war program. There were others that did not believe they were in a position to extend, either financially or with room and organization and various other reasons, and did not attempt to increase their facilities for some time after others

had been making improvements and preparing to give a greater efficiency and a greater service to the country. In the case of our own plan, as an illustration, we were hemmed in pretty well and, as we thought, pretty well buttoned up with the one unit which we had at Toledo. Mr. Schwab and Mr. Piez came to Cleveland and urged us to increase our capacity. I made a little statement at the time that they were there, rather objecting to our attempting to increase our capacity at the time, and was quite promptly sat down on as being rather unwilling to do all that I could for the cause, which, of course, always touches me a little, and finally Mr. Schwab and Mr. Piez went to our yard, looked the situation over, and they thought we could do something more than we were doing and urged us into the programs, much against our own opinion of what we could carry out in time to render any very efficient service to the country.

Mr. STEVENS. How many ways did you have originally?

Mr. WILKINSON. We had four ways at the time; no; three ways at the time, and we built, at a cost of \$1,200,000, three more ways and all the various developments that were necessary, and which are not quite finished yet, but which will be finished probably within 60 or 90 days. Now, on the basis of the contract which we signed, we made an investment of \$1,200,000, of which a percentage was to be given us as outlined in the contract which we took.

Mr. STEVENS. What do you mean by that, a percentage of the cost of the ways?

Mr. WILKINSON. Yes; there was an understanding in all these contracts that, if we invested a certain amount of money, about two-thirds of it should be considered as a part of the cost of the proposition.

Mr. STEVENS. Did you have a flat sum?

Mr. WILKINSON. Yes; they were all flat sums. Everyone of the Great Lakes contracts is a flat-sum contract.

Mr. STEVENS. That sum was large enough and was supposed to cover a part of the cost?

Mr. WILKINSON. Yes.

Mr. STEVENS. How many contracts did you have?

Mr. WILKINSON. We had a contract for 16 vessels, and we were to put in \$600,000. We agreed to put in \$600,000. Now, when we started with the \$600,000, we were no better off. We could not build any more boats with the \$600,000 in there, than we could if it had not been put in. It was necessary to make a complete unit.

We had to have the power and the machinery and the punch shed and everything. The capacity had to be balanced up in order to get the use of the ways. The balancing of the plant required an expenditure of \$1,200,000.

Now I propose to take a little different view from anyone in this room on this question. In so far as a reasonable profit, and in so far as our expenditures made in this investment, and the necessary completion of contracts, to take care of this proposition, I believe it to be not only legally but morally right that we be protected to the extreme. Such business as is not necessary to the carrying on and completing of this program with a fair return to the men in the business, could and should, I believe, be subject to a reasonable competitive basis, and a reasonable adjustment made if neces-

sary with the Shipping Board. We do that in law; we do that in various lines of industry. It has been the usual recent business method of trying to take care of extraordinary conditions, and these are extraordinary conditions. They are not the usual business conditions.

Now, I do not care what anybody else does, and I do not care what anybody else's contract is. So far as I am concerned, and so far as my company is concerned, we would be willing to make any reasonable business deal that is right and just, by which we are made good and safe on our proposition for all business that comes in the commercial end of the business—

Mr. STEVENS. What do you mean by that?

Mr. WILKINSON. I mean that in the case of any contracts that are not necessary for the amount of investment we have made for the purpose of assistance of the Government, but which we could not get out of, we would consider these contracts upon some basis of adjustment, the same condition applying with the Government that would apply with a customer to whom we went out to obtain that business. Upon that basis I would be willing to sit down with the board as an individual and adjust that question without involving or implicating anybody else in the business.

I do not care what the other fellow says. It is a question of what I do myself. I do not care what the other fellow's views are; these are my views. As president of this concern, I am responsible to my stockholders for the policy I pursue, and I will be held accountable to them for the policy I pursue. Outside of that I do not care anything about compensation or conditions or what not. There is a reasonable condition under which I am willing to do my part to adjust any contracts with the Government or anyone else upon an equitable basis that arises out of an extraordinary condition, and that is the feeling we have in Toledo.

Now, as to our suffering for something which no one is to blame for—I was fool enough to think that the war would last two or three years. God help us, I am glad it did not last any longer, but it was a condition that no one could foretell, and while we made fools of ourselves—and while I am willing to say to those around here who went in on this on the advice of various people—that about 50 per cent of all the plants are probably going into the hands of receivers, and we will have to make some kind of an organization to help ourselves out—it seems to me that this is a part of the suffering the business men will have to take, the same as the boys who paid the price and stayed over in the fields and are buried on the other side. Now, that our Government here at home, and our Congress and our Senate, should have no sense of appreciation of what may or may not have been done by the men in the game, and that it should not be considered any part of the war cost, and that the great losses sustained by many of these shipbuilding plants should not be of any moment to Congress or Senate, that is something I fail to see.

I know a man who put \$1,000,000 in and borrowed \$2,000,000 more and he has lost his \$3,000,000. Nobody is going to reimburse him for that money. The lake situation was an extraordinary situation. It had, perhaps, the greatest efficiency for small boats of any place, which was proven by the number of rivets driven and the accom-



plishments made. Naturally, we did not go through as many vicissitudes as the man on the Atlantic coast who built new plants. He did not have all the efficient conditions and he did not have our opportunities. We should not be penalized for that. We should be given a reasonable compensation for the condition in which we are in, because there will be a great deal of money spent by this board and by the Government where there was no efficiency, and no practical results will come back to aid the great cause for which we fought.

Now, I do not believe that you can make a rule that will apply to all. I have wanted to say something at various times, and I was asked to-day to speak plainly, and I am willing to do it.

Mr. STEVENS. That is what we want.

Mr. WILKINSON. I went out of this office, or an adjoining office here, with a contract in my pocket, signed at 10 o'clock in the morning for eight ships. I saw an old man, nearly 80 years old, in the afternoon, who has signed a contract for six ships for \$200,000 less per ship; signed a contract with the same man, and under the same conditions. Now, I will tell you, I said then, and I say now, that that did not look good to me, and it does not look good to me yet. Because one man insists upon receiving one price for his contract and his competitor a few miles away shall take one from the same man for \$200,000 less, because he does not know any better and, perhaps, does not know his own costs, and so forth, brings on a condition, Mr. Stevens, by which it is pretty hard to say that he must make exactly the same conditions in the readjustment of his contract and his building program that his competitor makes who may have had an entirely different proposition. There are men in this room who have taken about \$200,000 more for ships than I ever got out of a ship in Toledo, and I got \$200,000 more a ship than other men got out of the ship for the same kind, the same dimensions and the same program.

Mr. STEVENS. You mean there was a difference of \$400,000 on some of the contracts let on the lakes?

Mr. WILKINSON. You heard here that the prices dropped from \$225 to \$190 a ton. It depended a little on when you got your contract. There are men who made lots of profit on this business earlier in the game; not later. On a rising market, before it was up, not on the market after it was up. The earlier contracts that were taken, before the wage had reached its maximum and before conditions were established made an entirely different condition from that which has prevailed in the past 12 months. Only just one year ago we began making the first money that we made in Toledo in five years, and we lost, the year before, a considerable amount of money, so that we had to drop our dividends. Now, we come in here with a contract, a supposedly high-priced contract with a \$1,200,000 building program attached to it under which we have been able to build a few of the vessels and pay a part of that improvement.

Now, I am willing to sit down with this board upon any basis of equity and justice and judgment and do the absolutely fair thing between man and man on any contract that I have taken with this board for the Toledo Shipbuilding Co., but there are a great many things that ought to be taken into consideration, such things as Mr.

Pessana has mentioned. If one concern invested money and received nothing from the Government they should receive a consideration for that. If another concern received two or three or four million dollars from the Government, that should be taken into consideration. The contract and specific conditions should be also taken into consideration in the readjustment, or the same thing will prevail that is prevailing on the Atlantic coast and all over the country and will mean chaos, which should be avoided if possible by the Shipping Board and the Government, and I think that is the aim and purpose not only of this meeting, but of the work going on in the Shipping Board. But I do not believe it is possible to sit down and say how much per ton everybody could build their ships for and what price per ton will be the price of ships everywhere under all conditions. I think you will all agree with me that it is not the purpose of the Shipping Board to give many more vessels to the Great Lakes. I think you will all agree that that is true. They have an enormous program of expenditures and the greatest service returned by any particular department of the shipbuilding business, so that I think it is vital to the—

(Mr. Hurley reentered the meeting at this point.)

Mr. WILKINSON (continuing)—adjustment of this that we get at a fair basis as between the various interests and not attempt to classify them all and put them all in one category and assume that the same conditions prevail everywhere, because they do not, and with that qualification I say to you that at all times I am willing to sit down upon any unfinished business or business that is yet to be completed and make any adjustment that may be right as between the Shipping Board and the shipbuilding plants.

Mr. STEVENS. I think Mr. Wilkinson's remarks have been very helpful, and I can assure him there has been no plan or purpose here to put everybody in the same box and make a uniform rule. Any revisions will have to be made in the light of the circumstances surrounding each contract.

Mr. HURLEY. We are glad to get your point of view, Mr. Wilkinson, because that is what we are here for—to get individual points of view. Of course, there was one disadvantage on the Great Lakes, and that was that they were so efficient that they built too many ships for peace times.

Mr. WILKINSON. I am sorry you did not get all my remarks. I recognized that you did not intend to extend your operation of these passenger steamers. It looks to me as if this was the final call and that you are saying to the Great Lakes builders, "Now, of course, we are through with you. We have to settle up. What will you take?"

Mr. HURLEY. We are trying to take the problem as a whole—the Atlantic coast and the Great Lakes, and the Pacific and the Gulf—and we realize that the ships that were built on the Great Lakes were badly needed during the war. We needed them as badly as we needed those built on the Atlantic coast and the Pacific and Gulf. They were mighty welcome and came in very, very handy. It seems to me, in justifying our position, and continuing to build ships under peace conditions into 1920, and the last half of 1919, and asking Congress for additional appropriation, we realize we can not dispose of the Great Lakes ships as readily as we can some of the others, and

they can not go into the trades we are trying to work out that some of the other ships can go into.

Mr. WILKINSON. Just a moment: I made that remark to Mr. Schwab and Mr. Piez at the lovely luncheon which we had at the Union Club, at which we were all so happy, and there seemed to be no disposition to take into consideration the fact that we knew that we were inland seas. I tell you it makes a difference whether you locate your 10-story flat in the Great Sahara Desert or in the heart of New York City. The rentals are different. And it is different if you put in three or four million dollars in extending shipbuilding business. It is a home business. We never built boats for the ocean. We built simply inland sea tonnage, and we were capacitated to take care of the great inland seas, and that was performing our part of the work. The Toledo Shipbuilding Co. should never have doubled its plant. I said to our men this morning, "If I had stood with Charlie Schwab, instead of letting him bluff me over; if I had just stood there with our plant where it was and taken our contracts and built all the boats we could have built, we would have given you about the same anyhow—one a month—if I had stood there I would be all right now." But, now I am just finishing up that program there and have not built a ship with it.

Mr. HURLEY. Have you laid keels?

Mr. WILKINSON. We have laid two keels on the first program. I am perfectly willing, as I say, to make reasonable adjustment on anything that is right. I am putting all my cards on the table. I have twice the capacity at Toledo that I will want in a good many years, unless a canal is made big enough to let us become competitors with the Atlantic coast shipbuilders, and I won't see that in my time, Mr. Hurley. Therefore, I consider this part of this world cost and this war cost, and I do not think this Government should criticize the people who gave almost 50 per cent of the needed tonnage at the time, and at the expense of a good many millions of dollars of capacity which they can not get to the seas. They are confined, like a man who has gone inland and built his capacity. I think the Government should take that into consideration, and take into consideration the conditions which confront us, that we are not open to the competition of the world, and can not build under any conditions for competition. We realize that we are through. What we will get out we will get. If I can read the signs of the times, I think there are Atlantic shipbuilding companies enough down here to take care of most of the 4,000-ton boats. I think these gentlemen will see that we do not put any more of them down here than is necessary.

Mr. HURLEY. You mentioned the fact that you did not think the Government should criticize. This meeting is not one of criticism.

Mr. WILKINSON. There is another question I did not treat on. It is in the minds of every man here, and it is giving everyone much concern. We were told that you would do all you could for us on the amortization of this additional property, but you could not assure us that we would not be called upon to pay the Government, providing they arbitrarily took that view of the situation. I do not know whether they will go back or not and ask us to take the cash and bond our properties to pay for the deductions made on this war program, as they did in a company in which I have just had a little difficulty.

We had \$2,600,000 of bonuses paid—everybody, from the stenographers up. There was a large bonus, but it was very widely distributed. None was taken by the chairman, if you please. The Government said, "That is a nice thing to do; splendid, but you must pay us \$1,300,000 of it, and then you can give them the whole company if you want to, but you can not charge these bonuses into the expense of the business until after you have paid us the tax upon it." You know we will fight a little, but we will probably lose.

Mr. HURLEY. That all should be taken into consideration, and when any adjustment is made you should be satisfied, from all Government agencies, where you stand. We are not in any way trying to take advantage of a condition which we all know is very uncertain, and I do not think any man should make a settlement or adjustment without being assured by the Treasury Department and by the Government that he is free after he adjusts his claims on the lines mutually worked out.

Mr. WILKINSON. On that basis I think a good many million dollars would be saved by this corporation and the shipping industry. I am trying to protect our company, in the remnants of our last contracts, so that when a man comes in and says: "All right, we do not care what they told you, you have to pay this amount," I do not want to make a settlement by which I give that back to the Shipping Board, and then when we have given it back and haven't anything, have them come in and have to give it to them out of cash assets, on the ground that there was no authority for that, and that you had no right and we would have to pay it.

Mr. STEVENS. You do not want to be taxed on what you give back?

Mr. WILKINS. No.

Mr. HURLEY. I do not think it is fair to the shipbuilding industry as a whole to have one branch of the Government urging them to get their prices down in order to stabilize the industry as a whole, thinking of the future of the industry while other branches of the Government jump on them, and take everything away from them. That can not be done. Everything will have to be clarified. We first must think of the industry as a whole and every branch of the Government should cooperate with the Shipping Board in working that problem out, and I want to say that every member of the board here is heartily in favor of that sort of cooperation. How many of the Great Lakes shipbuilding concerns have we heard from?

Mr. ACKERSON. Mr. Pessano and Mr. Wilkinson.

Mr. HURLEY. I would like to hear from the other gentlemen.

Mr. ACKERSON. Also Mr. Smith.

Mr. WILKINSON. Mr. Smith is a little concerned about a statement I made here. I said we had two keels laid, but we have laid keels for six in the last program. There have been two already launched, and we have laid keels for six of the eight in the last program. We had sixteen.

Mr. STEVENS. You had sixteen. You have eight laid. There are eight yet for which the keels have not yet been laid.

Mr. WILKINSON. We will lay the keels for the next one in a few days.

Mr. HURLEY. I would like to ask Mr. Pessano and the other gentlemen on the Great Lakes the amount of the investment they put in; that is, their own money that they put in?

Mr. PESSANO. A little over two and one-half millions.

Mr. WILKINSON. \$1,200,000.

Mr. ACKERSON. That wasn't your own money?

Mr. WILKINSON. Well, we have \$800,000—there was \$800,000 of our own money; in other words, the Shipping Board agreed that we should have four, so we put in eight of our own money.

Mr. ACKERSON. We agreed to give you at least two-thirds, as I recall it.

Mr. WILKINSON. That was the amount in the contract.

Mr. HURLEY. I want to find out what you have put in for war purposes.

Mr. WILKINSON. \$800,000.

Mr. HURLEY. And the Government put in—

Mr. WILKINSON. \$400,000.

Mr. PESSANO. We have put in two and one-half million dollars of our own money.

Mr. HURLEY. And the Government?

Mr. PESSANO. None.

Mr. HURLEY. All right; what about the other Great Lakes yards—the American Shipbuilding Co.?

Mr. A. G. SMITH. The American Shipbuilding Co. has a contract which takes care of that. We put in yard extensions something over \$7,000,000.

Mr. HURLEY. Of your own money?

Mr. A. G. SMITH. Our own money, up to date.

Mr. HURLEY. For war extension?

Mr. A. G. SMITH. War extension.

Mr. ACKERSON. How much did your contracts provide in addition to the base price, to take care of that?

Mr. A. G. SMITH. We have no base price. Our present contract is a modification of the original contract.

Mr. ACKERSON. It is taken over on the cost-plus?

Mr. HURLEY. I am trying to get the investment in the Great Lakes yards.

Mr. A. G. SMITH. Our yard extension amounts to something over seven millions. When it is completed it will be nearly seven and one-half millions.

Mr. C. W. STINER (Saginaw Shipbuilding Co.). We have put in over \$1,000,000.

Mr. HURLEY. For war purposes?

Mr. STINER. For war purposes.

Mr. HURLEY. What other yards?

Mr. CHARLES C. WEST (of the Manitowoc Shipbuilding Co.). We have put in a million dollars of our own money, and of that \$264,000 is applicable to the Schwab contract, provided we are allowed to complete it.

Mr. HURLEY. What do you mean?

Mr. WEST. The last 12 ships.

Mr. HURLEY. How much money did you have in your yard before you put this in?

Mr. WEST. About a million dollars.

Mr. HURLEY. And you have put in an additional—

Mr. WEST. Million and a half.

Mr. WILKINSON. Upon the completion of these ships we were to receive \$400,000. The agreement, first, was this: Two-thirds of this amounted to \$400,000, but we had to put \$1,200,000 in. We found there was no use of putting that in unless we built everything that went with it. We had to increase the unit. If we increased the capacity, we had to increase the power and everything accordingly.

Mr. McCLELLAN. We had in about \$3,000,000.

Mr. HURLEY. American Shipbuilding Co.—what did you have?

Mr. A. G. SMITH. You mean our original investment in plants?

Mr. HURLEY. Yes.

Mr. A. G. SMITH. That is a pretty hard question to answer. Roughly—I am guessing about this thing—roughly, I would say that the original investment was in the neighborhood of \$15,000,000 before the war. That is a very rough estimate.

Mr. PESSANO. Mr. Chairman, may I offer a suggestion? I think what you have in mind is to get at the difference in contracts. These contracts, which all these increases in plant account are responsible for, the contract given by Mr. Schwab and Mr. Piez just a year ago, as Commander Ackerson will remember, these contracts were written at \$800,000 as a base price. All of the other contracts take into consideration an allowance of \$20,000 per ship for plant account. That made all the other contracts \$820,000, against our \$800,000. That was allowed for plant account, as stated by Mr. Wilkinson; about two-thirds of the total cost of it.

Mr. HURLEY. That covers another matter. I am trying to get the total war investment in the Great Lakes yards.

Mr. McCLELLAN. We originally had \$1,100,000 in our plant. We added \$900,000, and on the Schwab contract put in \$1,700,000, on which we were allowed, under the terms of contract, \$375,000.

Mr. HURLEY. For plant expenses?

Mr. McCLELLAN. For plant expenses, yes, sir.

Mr. HURLEY. The actual amount you have put in is how much?

Mr. McCLELLAN. \$2,600,000 for war purposes. While I am up I would like to correct something that has been said about yards being reimbursed to two-thirds of the costs on these last contracts. We were reimbursed for \$375,000 and spent \$1,700,000.

Mr. B. C. COOKE. (Of the Globe Shipbuilding Co., Superior, Wis.). We have spent about \$600,000 of our own money.

Mr. HURLEY. What was the original investment?

Mr. COOKE. Our plant was built entirely for war work. When the war contracts came on we just had one berth and contracted for two boats, and then we went into the war business and everything from then on was for war work. We took 10 boats of the last Schwab boats. First, we took five and were allowed \$20,000 a boat, the same as the others, and then five more without any allowance whatever. Our plant is up in the Northwest there. It is built on a swamp. It is of temporary nature. Our machine shop is a disgrace, costly of operation, because we have to do things quickly and get out boats at the same time, and when we are through with our war work, the plant has to be scrapped absolutely; and if there is any question about that, we are perfectly willing to put it up for sale to the highest bidder to establish the truth of that remark. That is the position we are in. We want to meet the board fairly and squarely and will show

every card in our hands. But, as I look at it, about 50 per cent of the plants on the Great Lakes have got to quit business and go into the hands of a receiver. There is no use for them. We can not build ships for the ocean and there is 100 per cent more capacity upon the lakes than necessary for local business. It seems to me we have simply got to quit business. We have no dry dock and no repair facilities, and our plant is built of second-hand timber. It is racking itself to pieces. The ground is shaky, and since I have been East here, part of the power plant—the walls—fell down.

Mr. HURLEY. We won't have any trouble with you. You won't build ships. [Laughter.]

Mr. COOKE. I am frank; the only thing that saved our organization is that what work we have turned out has been good work and that has been due to the organization and not to the plant. When I go through these Atlantic coast plants, it makes me wonder how our men could turn out the work.

Mr. HURLEY. How many ships have you built?

Mr. COOKE. We have built five and have five ready to go out this week.

Mr. HURLEY. How many ways?

Mr. COOKE. Five.

Mr. HURLEY. How many more keels to lay?

Mr. COOKE. Only five more to lay, and we slowed up our program for the sake of the others, because we wanted to keep our men working as long as we could.

Mr. HURLEY. You have \$600,000 in the plant?

Mr. COOKE. Yes, sir.

Mr. HURLEY. Did the Government put that in?

Mr. COOKE. No; we did. The Government put in a total of \$100,000 for the whole thing.

Mr. HURLEY. What other Great Lake yards are there?

Mr. PESSANO. You have heard them all.

Mr. HURLEY. I would like to take up some of the other yards, and I think every man here ought to have an opportunity to express his views. The board feels that we will all profit by each man explaining his own conditions, and there is no question but that each man must have a different treatment from the others. We can not adopt any general rule to apply to all. I think we had better start up here at this end.

Mr. HENRY R. CARSE (of the Submarine Boat Corporation). I represent the Submarine Boat Corporation and the Newark Bay Shipyard. We were the first people who brought to Gen. Goethals the possibilities of constructing in large quantities cargo vessels from commercial steel, using the forces of the bridge and tank shops of the country with the idea of fabricating as much as was possible in the shops as far west as the Mississippi, and then taking the full force of these shops to assemble the material on the Atlantic seaboard. As Gen. Goethals suggested, all our calculations were made on the basis of flat prices—we to provide the yards, the plant, and all facilities. As you all know, certain difficulties arose in the Shipping Board, and when the question came up again with Admiral Capps, the only subject discussed by him with us was on the cost-plus-fee basis. He was not interested in a flat-price contract, and he insisted upon taking

over the lease which we had arranged for the property at Newark Bay, and acquiring the plant at the expense of the Emergency Fleet Corporation. Of course, we did not object to that proposition, as it was similar in every respect to the proposals that were then made during the summer of 1917 to the American International Co., who proposed the yard at Hog Island, and to the Merchants Co., who proposed an extension of a plant that they then had at Bristol, Pa. These contracts were signed about September 12, 13, or 14, 1917.

We found quite a few difficulties in carrying through the cost-plus-fee agency contract, because of interference with our management by the representatives of the Emergency Fleet Corporation, and Mr. Hurley will remember that I discussed the subject with him, and he requested that we give a study to the entire subject and see if we could not make a proposal of taking over the whole proposition on our own account.

We were working along these lines, when Director General Schwab, a few days after his appointment, called at the yard with Vice President Piez and Assistant General Manager Bowles, and they brought up the question of canceling the contracts and taking a new contract on a flat price, at the price stated by them. The price made by Admiral Bowles was \$966,000 per vessel, of which \$600,000 per vessel was to be paid to the Fleet Corporation as rent for the yards. Our contract of September was based on an estimated cost of \$150 per dead-weight ton. Our vessels were then being estimated at 5,000 tons dead-weight, but because of certain changes made in the vessels, they measure, as built, 5,350 dead-weight. The estimated basic cost was \$750,000, of which \$350,000 was calculated to be the cost of material, and that covers the freight; \$200,000 the cost of labor, \$200,000 overhead, in which was included the cost of doing the fabricating work at the bridge and tank shops throughout the country. We always calculated that these shops were simply branches of our plant. The revised flat-price figure was determined really by guess. Sitting around the table on April 24, 1918, at luncheon, we guessed that the cost of the material entering into the cost of the vessel would be \$400,000. As the thing worked out, it was found that the material entering into that vessel will cost approximately \$440,000. We guessed that the increase provided for by the schedule of labor adjustment, as of April 6, 1918, was an increase of 40 per cent over the wage scale in the port of New York of July, 1917; which was the basis of our original contracts. It has been calculated by our auditors, and I find that it has been confirmed by other ship yards, that the wage scale of April 6 was an increase of 43 to 44 per cent above the scale of July, 1917, and they provided an increase of 15 per cent over our overhead, which really is much less than it actually is, so that instead of the readjustment in 1918 to the flat-price contract adding to the cost of the vessels to the Fleet Corporation it really provided for a very substantial decrease. That price was determined at the time with the full knowledge on the part of the officials of the Fleet Corporation, and of ourselves, that the cost to us at that time on the vessels which we were erecting was very largely in excess of that contract price, which figures at \$179 a ton, but we also believed that we could greatly reduce that charge. As everybody in the shipbuilding busi-



ness knows, any calculations made in 1917 as to what they were going to do in producing ships turned out absolutely wrong. There is no one who made any calculation based on experience or judgment of what he could do who found he hit anywhere near it.

There are many things that sometimes we do not like to go into detail about, but I think that shipbuilders instead of being assisted by many of the governmental boards and functions were hindered; many of the rules laid down hindered instead of assisted the economical construction of ships. The rules of the labor adjustment board, I think, every one found to be very, very costly. Some of these were provided for by the Fleet Corporation undertaking to assume any increase in cost by reason of rules and regulations of such boards.

We ran along during 1918; we were doing very well indeed, when we were stopped by the nondelivery of proper machinery for our vessels. We were hung up for four months, while the Fleet Corporation were endeavoring with the contractors—they having commandeered the plant of the Westinghouse Co., who were doing our machinery, and ordered our men out of the Westinghouse plant—to work out the defects that had developed in this machinery. We had over 20 hulls in the water with no machinery. We were running behind half a million dollars a month. We had to spend a very large sum of money above that which we were receiving for the work done, so that it was necessary for us to slow down very quickly, and we reduced the capacity of the hulls at least one-half. Of course we could not reduce the overhead, and we ran along until that machinery was put in proper condition and since that time, since about March, we have been able to do rather effective work, and to increase the efficiency of the plant, so that now we are running well within our contract price, and unless some other matters, which we do not foresee now, similar to matters which we did not foresee in 1917, may arise, we believe that we will be able to finish our contract rapidly, and with some profit, but the profit will be unknown to us until the contract is finished.

Of course we all know that the Newark Bay Shipyard is a very large yard. We have 28 ways, and we have about 13,000 men. In order to attain commercial efficiency in a yard of that size, it is necessary to have large orders ahead, because if the men can see the end of the job with nothing new in sight, they will disappear; they will be looking for more permanent jobs, and if that should happen our costs will mount again, the same as they did last fall when we were stopped for want of machinery. We have launched 45 hulls. We have delivered 20 or more. We have delivered 3 or 4 vessels a week now to the Shipping Board, and the others are in the water. The hulls, as we launch them now, are practically complete, and with machinery coming along in proper shape we calculate we will be able to finish equipping a ship in about 30 days. We have done it in a little less. In addition to the 45 ships launched, we have laid 28 additional keels. We have material in the plant for most of the other war contracts for 150 vessels. The 150 vessels require, I believe, about 270,000 tons of steel. I believe we have in our yard about 225,000 tons of steel, upon which one-quarter of the work necessary to complete the ship has been done at the dif-

ferent plants throughout the country. The water tube boilers we have in the yard, a part for the entire 150 vessels—we have the entire boilers for 120 vessels, and the other material entering into the construction of the ship is piled up in our yard or adjacent thereto in like proportion.

We feel that we made the adjustment in our contract a year ago which Mr. Hurley is now discussing. We had some very serious thoughts during last fall and this spring as to where we were going to land with that adjusted contract. The executive officers, I think, had some very unhappy moments, but we have finally evolved a system of doing the work which, if we can continue, we believe will bring the cost of erecting these vessels down to a commercial basis where we can compete with anybody in the world. I am not saying this in any bragging manner—I am simply stating a plain fact, but a yard of that size requires much work, or else it can not be accomplished. Your overhead, if you do not have sufficient work, would simply swamp you. Our pay roll runs over a half million dollars a week. We, of course, all understand that the Newark Bay Shipyard is owned by the Emergency Fleet Corporation. We had made a lease of this property from the city of Newark for two years with an option of renewal months before we had any contract. We believed that the need of the country for cargo vessels was so great that a contract would come to us eventually, although there were many delays before we signed a contract. We had to spend or had obligated ourselves to spend a half million dollars, and the day the contract was signed 500 tons of structural steel left Buffalo and was in the yard in a few days, and that was one reason why we managed to get so far ahead of the other yards.

Mr. HURLEY. How much money has the Government got in there?

Mr. CARSE. The Government, I believe, has between 15 and 16 million dollars invested in the plant. The appropriation was for a larger amount. We have not spent the entire amount appropriated, and we do not expect to spend it. We have tried in every way to save money. There are many things in the plant which are there because they were ordered there by officials of the Fleet Corporation, which we do not consider necessary. The plant costs a great deal more than the original calculation, because of the nature of the soil. The engineers of the city of Newark told us the soil was so firm that any buildings could be erected on it, but when we commenced to lay our railroad tracks in warm weather we found they were disappearing, so that in order to get any firm soil we have placed on 120 acres over 500,000 tons of cinders, about 4 feet of cinders. In building our ways, because of the nature of the bottom, and the failure of the Army to do the dredging in the time calculated, so that the ways had to be built outboard, they cost a great deal more money, and then, there are certain buildings that we hardly consider necessary to have there.

Mr. W. SCOTT PROSKEY (of the Atlantic Corporation). This is my first appearance at a conference of this kind, and I was wondering if you would take it in good part if the larger and more important yards should be heard from first.

Mr. HURLEY. I have no objection.

Mr. H. L. DICKERSON (of the Standard Shipbuilding Corporation). Our final contract with the Fleet Corporation is for 10 boats on a

lump-sum price, of which 3 have been launched, 6 are on the ways, and the final keel is to be laid this month, probably the 26th. The contract was signed March 1, 1918, prior to the first award in that district of the Macy Board. The contract price was \$179 a ton, which carried the usual protection on the labor and items of that kind.

Mr. HURLEY. That contract is with the Fleet Corporation?

Mr. DICKERSON. Yes, sir. The plant expenditures by the company are about \$2,000,000. The Fleet Corporation has expended about \$3,000,000, without any provision for amortization, and an additional million dollars predicated on the assumption that we should get additional contracts, which we did not get.

Mr. HURLEY. Your corporation has spent an additional million dollars?

Mr. DICKERSON. No; the Fleet Corporation, so that the Fleet Corporation have spent approximately \$4,000,000, of which the one million is salvaged, and three million not covered by any provision for amortization or salvage.

Mr. HURLEY. There is a mortgage on the plant?

Mr. DICKERSON. Yes, sir.

Mr. HURLEY. You have \$2,000,000 in and the Fleet Corporation have four million.

Mr. DICKERSON. Yes, sir.

Mr. HURLEY. We have four million?

Mr. DICKERSON. Yes, sir; the Fleet Corporation have invested about \$4,000,000.

Mr. HURLEY. For extension?

Mr. DICKERSON. Yes.

Mr. HURLEY. How many additional ways are there?

Mr. DICKERSON. Two additional ways, with additional boiler and engine and machine shop capacity.

Mr. HURLEY. Is that all finished?

Mr. DICKERSON. About 99 per cent finished.

Mr. HURLEY. How many requisitioned ships did we take over?

Mr. DICKERSON. Thirteen, all of which have been delivered.

Mr. HURLEY. Who had these contracts?

Mr. DICKERSON. Originally?

Mr. HURLEY. Yes.

Mr. DICKERSON. I can not give you the names, but there were some for Norwegian and Italian owners, two for French owners, and two or three for the Cunard Line.

Mr. HURLEY. Have you any knowledge of what the contracts were taken over for?

Mr. DICKERSON. The original contracts signed for?

Mr. HURLEY. Yes.

Mr. DICKERSON. Yes; \$147.50 to \$180 a ton. I think they will average about \$165.

Mr. HURLEY. And the requisitioned ships have all been delivered?

Mr. DICKERSON. Yes, sir.

Mr. HURLEY. And you are working on Fleet Corporation contracts?

Mr. DICKERSON. Final contracts with the Emergency Fleet Corporation.

Mr. HURLEY. And how many more keels are to be laid?

Mr. DICKERSON. One. We have a launching on the 26th. Ninety per cent of the material was ordered before the armistice was signed and practically all the plate shop work for all the boats is completed.

Mr. HURLEY. Have you any idea as to the cost of these ships; what it is costing the Fleet Corporation?

Mr. DICKERSON. The requisitioned ships cost about \$202 a ton; the contract ships, these final 10 I estimate will cost about \$212.

Mr. HURLEY. I thought that was \$221, the last estimate.

Mr. DICKERSON. No, sir.

Mr. HURLEY. \$212?

Mr. DICKERSON. Yes, sir.

Mr. WILKINSON. May I ask a question? Is that cost the investment of the Government?

Mr. DICKERSON. It is the cost to the country—labor, material, and overhead.

Mr. WILKINSON. That is the selling price?

Mr. DICKERSON. That is the contract price with protection.

Mr. JOHN C. PEW (of the Sun Shipbuilding Co.). I should like to wait until some of the others have spoken; our yards are small and we are new in the business.

Mr. C. W. MORSE (Virginia Shipbuilding Co. and the Groton Iron Works). This is quite interesting to me, because of the conclusion of the wooden contract I made with Gen. Goethals. He asked me to build some 5,000-ton steel ships, and I established a yard for that purpose. I objected; I said these ships are not going to be worth anything when the war is over. I did not want to build anything less than 9,000 tons. He said that Mr. Franklin said that Europe would build the big ships and we could build the little ones, so that it is interesting to me to see that the board wants to cancel little ships and build big ones.

As a result of the conference I had, we contracted for 12 ships at Groton and 12 at Virginia. Of the 12 ships at Virginia, one was launched about two months ago. If we ever get through making alterations for the Government, we will deliver her, but the last I heard—this morning—was to take off the upper deck, the fly deck. There will be another vessel launched there on Saturday next. There will be two more launched before the 4th of July. The contract there was for 12 ships, at \$165 a ton, on the basis of wages and material. Now, as I understand, the object of this meeting was to see if we could not reduce the price in some way to help the Shipping Board out of this emergency; we would be glad to, if we could.

We would be glad to meet the Shipping Board in any way that it is possible, but in the first place, the labor we can not touch; we are prohibited from putting that down, and our contract is based on that labor scale; second, our contract is based on the price of material—for 80 per cent—and anything we save in that goes to the Shipping Board. There is a long list that is called "Schedule C." What can we save for you gentlemen on that? I do not see how we can save but very little outside of what you save yourselves in the purchases. We are willing and want to assist in every way we possibly can, but I can not see how, except you save in the purchases or allow us to, and be a little more considerate in your changes. I think we have had a hundred changes at least since we started. We are getting them

every day, and it is very expensive and adds tremendously to the cost. You asked us to be frank—

Mr. HURLEY. Don't hesitate to say what you want.

Mr. MORSE. It seems to me that is the principal thing the Government can save in the 9,400-ton ships—the changes that are daily being asked of the shipyards. The next thing is the purchase of material. If we could have the cooperation of the board, we could save a lot of money that way.

Mr. HURLEY. In what way?

Mr. MORSE. Furnish the cash to buy the stuff with.

Mr. HURLEY. How much money have you invested?

Mr. MORSE. The yard cost \$3,300,000; the Shipping Board put up \$750,000; the rest we put up.

Mr. HURLEY. That is the Alexandria yard?

Mr. MORSE. Yes.

Mr. HURLEY. What about Groton?

Mr. MORSE. The Groton yard cost about four million; the Government, according to the progress payments to date, according to their way of figuring, the Government owe us \$2,600,000 and on the wood yard \$1,600,000.

Mr. HURLEY. What is your original investment in the wood yard?

Mr. MORSE. We owned the wood yard long before we entered into the contract.

Mr. HURLEY. Yes; but what is the original investment?

Mr. MORSE. I think \$400,000.

Mr. HURLEY. And the Government has an additional \$1,600,000 in there?

Mr. MORSE. No.

Mr. HURLEY. How much did they spend?

Mr. MORSE. I can not tell you; they started in to make progress payments; then they changed to imprest fund; then they stopped that and paid the pay roll part of the time and part of the time they did not.

Mr. HURLEY. How much have we put in the housings at Groton?

Mr. MORSE. I think about \$1,200,000.

Mr. HURLEY. What was the original contract for housing?

Mr. MORSE. Two million; we stopped you from putting up any more. We put up \$350,000 ourselves, the Government came in there and we made a contract with the Government—I do not know whether it has been framed or not—to throw in our \$350,000, and they would take the housings and take all the risk.

Mr. HURLEY. What about the steel ships in the Groton Iron Works?

Mr. MORSE. One sailed from New York.

Mr. HURLEY. How many contracts have you?

Mr. MORSE. Twelve.

Mr. HURLEY. How many have been finished?

Mr. MORSE. One has been delivered; one is ready to be delivered; one is to be launched on the 30th of this month; and as near as I can estimate, one every month.

Mr. HURLEY. How many ways?

Mr. MORSE. Six.

Mr. HURLEY. Any keels laid?

Mr. MORSE. Yes, sir; there are 7 keels laid, 8 keels laid out of 12.

Mr. HURLEY. Four yet to be laid?

Mr. MORSE. Four to be laid.

Mr. HURLEY. Of what capacity?

Mr. MORSE. Six of them are 8,800 tons; six of them are 9,400; all at Virginia are 9,400. But, regarding a saving of price, I do not see, as far as our contract goes—we have no cost-plus contract—I do not see but what it is up to you more than to us. If you can show us any way we can do it, we will be glad to cooperate, but you see you prohibit us on labor, you say out of savings on 80 per cent of material, that it goes to you, and I do not see where we can contribute.

Mr. HURLEY. Has your staff and workmen increased their efficiency any since the armistice has been signed?

Mr. MORSE. Oh, yes, sir. Our turnover is large down there for a new yard. You must bear in mind that both our yards are new yards. The ground was broken in Alexandria on the 1st of February a year ago, and we have had to build the works at the same time that we were building the vessels. We have down there 10 vessels fabricated; have the steel out. We will be through the 15th of next month our fabricating work for the Government, provided they do not give us the two ships they suspended.

Mr. HURLEY. What do you think these ships will cost per dead-weight ton, Mr. Morse?

Mr. MORSE. Well, you know I made an offer for three boats at \$215 a ton; \$225 for the *Gunston Hall*. When a man can get credit to build ships I do not hesitate to say that I could sell every ship we are building at the cost to you. I think they will cost you about \$1,800,000 or \$1,900,000 apiece.

Mr. HURLEY. \$225 a ton.

Mr. MORSE. Not that, probably.

Mr. HURLEY. Are they 7,500-tonners?

Mr. MORSE. No; 9,400. Of course, I do not know the policy of the Shipping Board, but if I am allowed to make a suggestion—

Mr. HURLEY. Glad to have it.

Mr. MORSE. Sell some of the ships you now have on favorable terms and you can get out of them all the money they cost.

Mr. HURLEY. Would you transfer the flag?

Mr. MORSE. Not necessarily. This proposition was not a transfer of flag, and, so far as the wooden ships go, Mr. Hurley, I wrote a letter to Mr. Piez on the 1st of January, according to which he could have gotten out on four wooden ships we built at their cost, and 45 days later I got an acknowledgment of the letter asking if the matter was still under advisement. The offer on the *Gunston Hall* was made, I think, at \$225,000—\$100,000 down, one-quarter before she went to sea, and the balance over a certain time. I make bold to say that I could get for you, if you make the terms reasonable, the full price of these ships as they come off.

Mr. HURLEY. What do you mean by reasonable terms, installments?

Mr. MORSE. I mean one-quarter down and one-quarter 4, 8, 12, or 16 months; something like that. You see, Mr. Hurley, they can not borrow money and there are very few people who have the cash to pay for a \$2,000,000 ship that they will pay right down for it. If the Shipping Board gets all that he earns, it seems to me that they do not take much risk, unless they could get somebody to pay cash down.

Mr. HURLEY. You would want a little more than you could charter the ship for.

Mr. MORSE. You want some earnest money from them.

Mr. HURLEY. That is the thing we have before us.

Mr. MORSE. You could figure the freight; you know what they get, and if you get one-quarter of a million dollars, and all she earns, and something more, it seems to me that would be one way of meeting that financial difficulty. I do not know how the 4,500-ton ships would sell; I am speaking now of the 9,400-tonners.

Mr. HURLEY. We are trying to find what the cost of these ships is on the average, not as an individual ship.

Mr. MORSE. As it has been stated here, the cost has not gone down any. The greater part is labor; the labor that enters into the construction of everything that goes into the ship, as well as the construction of the ship itself. I think the cost of material, if it goes down, you get the benefit of it under your contract.

Mr. HURLEY. Do you think that we could compete with Great Britain on the building of ships?

Mr. MORSE. Under certain conditions; yes, sir. If you will make a contract and let the American bureau, or British Lloyds visé the work and everything that is done in the ships, and allow the people money enough in progress payments to discount the bills, so that they can buy in the cheapest market, they can compete with any place in the world. We can at our yard, I do not hesitate to say, but if you are going to have eight or ten inspectors, who keep changing the ship every day they come along you can not get at the lowest cost. Our ship was changed from turbine engines to reciprocating, and from water tube boilers to Scotch boilers. It should have been Scotch boilers at first in my opinion. And then, regarding all the little fixings. As I say, that ship is lying there to-day, and it should have been off a month ago. I can furnish the next ship for you, as an individual, a month sooner than I could furnish it for the Shipping Board, and at a good deal less cost, and make it conform to all the specifications in the contract, but when you make a contract and then continually change nobody can tell what the cost is.

Mr. HURLEY. You mean by that, if you revised that contract and took upon yourself the entire responsibility of finishing the ship, you could reduce the cost of it?

Mr. MORSE. Let the British Lloyds of the American bureau have their inspectors there, and we will guarantee the ship to class.

Mr. HURLEY. And you could reduce the cost, and it will be more satisfactory to the Government and to you?

Mr. MORSE. Yes; you have things on that ship that are utterly uncalled for. You have a companionway for an old tar to go down on the ship, and he has always been used to going down a rope ladder. Then you have teakwood furniture and fixtures. Nobody would think, on a merchant ship, of putting in these things. You could get the same efficiency, and the same earnings out of a ship that would cost you a lot less money, get the same classification, and that is all a ship sells for. You could not sell a ship because the Emergency Fleet built it for any more money than you could if the American bureau or British Lloyds passed it. That is what you fall

back on. The men who are put in the technical department think they must do these things. They are put there for some purpose, and these changes come in from day to day. But, if you want to save some money on the ships, give us the contract, let us change the contract wherever there is absolute waste and give you the benefit, and have the ship classified. I would not hesitate to say that any ship-owner in New York or anywhere could sell one of these ships at \$100,000 less and satisfy him and satisfy the Government. I make that suggestion to you and I think it is perhaps well for you to consider it. Now, you say that there is over three billion that the Government has appropriated.

Mr. HURLEY. The Government has not appropriated it. It has authorized three billion and some million dollars to carry out this program.

Mr. MORSE. Has the board exhausted that?

Mr. HURLEY. Not the authorization.

Mr. MORSE. Didn't that cover all the commitments? You will have to excuse me, but Mr. Piez repeatedly told me they had plenty of money. It seems to me you are very close-fisted if you have.

Mr. HURLEY. We are short of money. Don't you understand that Congress authorized us to make contracts; but they only appropriated enough of the money authorized to go from July 1 to June 30 in each fiscal year. Now, then, we are getting very short of money, and we are up against it in so far as continuing.

Mr. MORSE. They have not appropriated enough money to carry out what they authorized?

Mr. HURLEY. Oh, no; they never do. They only appropriate for one year. That applies to all Government agencies; every department here must have money appropriated, not authorized. Authorization and appropriation are different things.

Mr. MORSE. I thought you said they had authorized that. I thought that was the same as appropriated.

Mr. HURLEY. They have authorized it, but not appropriated the money, and have not placed in the Treasury for our account the entire amount authorized. Now, we must go before Congress, inasmuch as the urgent deficiency bill was not passed at the last Congress; otherwise, we would have had all the money required to carry out our contracts, but we must go before Congress, explain the situation and they will ask us for a recommendation.

Mr. MORSE. I do not like to put our troubles before you people, but the Emergency Fleet, when the Groton Iron Works went into the receiver's hands, owed them \$4,200,000. That is the statement rendered by the receivers to you, and the reason we had to put it in the receiver's hands—we did it ourselves—was because we had checks, signed by our company, and by the Emergency Fleet Corporation, which the bank did not have the money to honor. That is what occasioned that concern going into receiver's hands. There was no more need of that concern going into receivers' hands than the United States Government.

Mr. CARSE. Mr. Hurley, one thing you mentioned. In regard to the question of American yards competing with British yards in building merchant vessels, I think it should be very clearly understood, in the question of competition, that the vessels should be of the same nature and class. These vessels being built in the United



States now are very much more expensive than vessels for similar work being built in Great Britain, because they have very many things on their vessels which the British do not even think of, and these things add very greatly to the expense; but I believe, I see no reason why, for similar ships, the shipyards of the United States should not fairly compete with British yards.

Mr. H. A. EVANS (Baltimore Dry Dock & Shipbuilding Co.). What is the relative rate of wages in Scotland and this country among shipbuilders?

Mr. CARSE. I do not know.

Mr. EVANS. It is two to one. We pay twice as high wages. Are shipbuilders in Scotland better trained, or as well trained as the shipbuilders in this country?

Mr. MORSE. Very much better.

Mr. EVANS. Then, how can we talk about competing in cost with Scotland?

Mr. MORSE. I said in course of time.

Mr. HURLEY. Mr. EVANS, I would like to answer that. Do you know anything about the production per man in Scotland yards?

Mr. EVANS. Some of us were educated over there, and we know that practically in our yards the majority of our best trained men are called "Mac"—Scotchmen. There are exceptions, of course. Ask some of the old shipbuilders who have been in the business all their lives. These men over there not only give the man a training; there are opportunities for education.

Mr. HURLEY. I would like to talk to you a little later on that question. I have been making a study of that.

Mr. MORSE. In 1905 I contracted for two ships with the Clyde Co., the *Savannah* and the *Mexico*, \$1,050,000 a piece. I could have gotten the same ship on the Clyde for \$650,000. That is the relative prices at that time. Now, as I understand it, I may be misinformed upon it—the prices on the Clyde have gone up more than they have here. I understand there is a labor situation there that is worse—that is higher in percentage than here.

Mr. EVANS. The average wage is about 43 to 45 cents an hour.

Mr. HURLEY. We have all these figures, Mr. Evans, and also the production per man, if you would like to go over that with me. I do not think you are right. That matter will come up later.

Gentlemen, we are very much obliged to you for coming here. It is 5 minutes to 1 now, and if you will return at 2.30 this afternoon, we will appreciate it, and put in the afternoon. We want everyone to have something to say. This is instructive and helpful to us, and we appreciate the spirit in which you have come here. Do not hesitate to ask questions. We are here to answer them.

(The meeting thereupon recessed, to reconvene at 2.30 p. m.)

#### AFTER RECESS.

The board reconvened at 2.30 o'clock p. m., pursuant to recess.

Mr. HURLEY. Gentlemen, if there are any new arrivals I would like very much to get names. I mean if there are any gentlemen here now that were not here this morning, we would like to have their names.

Mr. Dilke, you represent the Carolina Shipbuilding Co. I would like to hear from you.

Mr. F. C. DILKE (president of the Carolina Shipbuilding Co., Wilmington, N. C.). We have an agency contract, and we probably haven't had enough experience as yet to contribute very much to the subject of this meeting. We are very much interested, however, in hearing the expressions of the shipbuilders.

Mr. HURLEY. I wish you would tell how much money you have put in and how much the Government has put into your yards, so that we may have the whole story.

Mr. DILKE. This is a four-way yard. We have four ways completed. The plant is just now practically completed with four ways.

Mr. HURLEY. And the keels laid?

Mr. DILKE. We have four keels laid, and are hoping to launch the first ship on July 4. We will have the second one ready to go within 30 days after that.

Mr. HURLEY. How many ships have you contracted for?

Mr. DILKE. Twelve 9,600-ton Federal ships. We have our steel practically complete for the first four ships, and we have the steel practically 75 per cent complete for the second four. We are having the midship section fabricated at Roanoke, Va., and we are fabricating the rest of the steel at Wilmington. We have four ways and all of the plant facilities for installing and outfitting complete. The engines and boilers, of course, come from the outside.

Your investment there up to the present time is about \$2,200,000, but that includes a lot of extra work that was done on two additional ways that were not completed, and were canceled; and in building the yard on a layout providing for eight ways. We started with a four-way yard, you understand. I don't know whether all this is of interest or not?

Mr. HURLEY. Yes, indeed; go ahead.

Mr. DILKE. We started with a four-way yard planned for more ways, and after Mr. Schwab came in he and Mr. Piez talked to us about making an eight-way yard. We rather held back from eight ways, feeling that the community was not large enough to support a yard as large as that, but we were given an order to build a yard on the plan of making eight ways possible, and then at a later time, being given an order to build two additional ways, which meant of course correspondingly increasing the other features of the plant capacity, and all of those other features were added for the six-way yard, but the two additional ways were not finally completed. They are all excavated, but were stopped on the 15th of October.

I haven't yet been able to get an estimate that I feel is accurate enough to talk about as to the probable cost of the ships we have on the ways. It will probably run over \$200 a ton, but I don't think very much.

Mr. HURLEY. How much money have you spent on housing?

Mr. DILKE. All we spent on housing was \$48,000, which was for a hotel, Fleet Corporation property, the hotel which we are operating. The housing proposition never went through and that \$48,000 is included in the figure I previously mentioned as cost of the plant. We found that very helpful in holding the men there. We are pretty much isolated, 110 miles off the main line of the Atlantic Coast Line,

and while our experience so far has been better than we hoped for with men coming there, it has been difficult at times, very difficult to take care of them. This hotel has been a very useful feature.

Mr. HURLEY. How many men do you employ?

Mr. DILKE. We have about 1,800 on the pay roll now, and they are running from 1,400 to 1,500 men a day at work. About 50 per cent of them are Negroes, and the last figures I had in the middle of last week 52 per cent of our riveters were Negroes. They are doing very good work and we have succeeded so far in working white riveters and Negro riveters on the same ship.

Mr. HURLEY. Have you increased the number of rivets in the past month or two over what you formerly did?

Mr. DILKE. No sir; we have not, we have been running an average of 22 rivets per gang hour for about two months.

Mr. HURLEY. Working piecework?

Mr. DILKE. Altogether, that is I say altogether, there are always some few odds and ends that have to be done on day rate, but the real driving is all on piecework basis.

Mr. HURLEY. How far advanced is the material on the last four ships that you have a contract for?

Mr. DILKE. About 30 per cent of the material from the mills, plain steel has been delivered, and due to some operations which we could not control at the beginning there has been a total of about 12 per cent of the steel fabricated for the last four ships.

Mr. HURLEY. Where was the material fabricated?

Mr. DILKE. At Roanoke, Va.; the Virginia Bridge & Iron Co. We have not fabricated any of the last four at Wilmington. We are just finishing up our fabrication for the first four, and we have started on the finishing of the shapes for the second four, and the Virginia Bridge is now shipping steel and has been for about two months on the second four.

Mr. DONALD. How much money have you got in your yard altogether? How much have you invested in your yard?

Mr. DILKE. \$2,200,000.

Mr. DONALD. So the Fleet Corporation has given you all the money in your yard?

Mr. DILKE. We are working with an invested fund. The yard is owned by the Fleet Corporation. The Fleet Corporation furnished all the money except for 60 days at the beginning, when we had to use about \$200,000 of our own to get going promptly.

Mr. W. SCOTT PROSKEY (assistant to the president of the Atlantic Corporation, Portsmouth, N. H.). We have a contract to build ten 8,800 ships, of which we have two practically complete and five others on the ways, three keels not having been laid. Of the five on the ways three are well along toward construction.

We have a five-way shipyard with a very complete fabricating and machine plant. We make our own engines with another company that is affiliated with us, the Mason Machine Co. We buy our boilers.

We expect before the end of the year to have completed the contract which we have submitted. There was much delay in what I might call cooperation between the board and ourselves, dating from four or five months back. For instance, the first ship that we put

overboard should have been in commission some time ago, as we understand she was chartered some time ago, and it was due primarily to the Shipping Board that we were not able to deliver but two ships. However, we hope that the helpful spirit shown by Mr. Hurley will enable us to adjust our differences and fix the matter so that whatever ships we are allowed to complete shall be completed in harmony and with satisfaction to the Shipping Board and ourselves.

Mr. HURLEY. What is your figure? What do you think the ships will cost per deadweight ton?

Mr. PROSKEY. Around \$200.

Mr. HURLEY. And how much money has the Government got in your yard?

Mr. PROSKEY. I understand about \$3,000,000.

Mr. HURLEY. How much has the Corporation got in?

Mr. PROSKEY. The Government was to furnish two-thirds and we were to furnish one-third.

Mr. HURLEY. How much have you put in?

Mr. PROSKEY. There is a controversy about what we have put in now.

Mr. HURLEY. There isn't any doubt as to what you have put in. You know what you have put in?

Mr. PROSKEY. No, sir; I do not.

Mr. HURLEY. You were to put in one-third and we were to put in two-thirds, and we have put in \$3,000,000. You haven't put in your third?

Mr. PROSKEY. There is a controversy over that, as I say. The Shipping Board says we have not. I am not prepared to say whether they are right or not; we don't think they are.

Mr. HURLEY. What about the material for the ships where the keels have not been laid?

Mr. PROSKEY. It is practically all there, sir.

Mr. HURLEY. Have you any accurate figures on the cost, or just an estimate of what it will cost?

Mr. PROSKEY. It is as accurate as we can make it at this time. We expect within a week to have more accurate figures.

Mr. HURLEY. The controversy with your company is that the Emergency Fleet officials feel you have not put in your portion?

Mr. PROSKEY. Yes, sir.

Mr. M. P. DOULLUT, president of the Doullut & Williams Shipbuilding Co. (Inc.), New Orleans, La. Our yard is at New Orleans, Lake Ponchartrain. We have a contract for eight 9,600-ton ships, on a lump-sum basis.

Mr. HURLEY. How much a ton?

Mr. DOULLUT. Well, the figures have changed so much owing to the labor price, etc., that I am not sure, but I figure it is in the neighborhood of \$182.

Mr. HURLEY. What was the original contract?

Mr. DOULLUT. About \$170. I am not positive, but it was about \$170.

Mr. HURLEY. How many ways have you?

Mr. DOULLUT. We have four ways. We have four ships on the ways now. We have received the steel for the whole eight ships. The

plant is ours; we put in half a million dollars of our own and the Shipping Board loaned us on our contracts \$600,000. Our plant is complete and we would have ships around now had we not been delayed by the Shipping Board owing to different changes in deciding on boilers, etc.

Mr. HURLEY. You put in Scotch boilers or water-tube boilers?

Mr. DOULLUT. Water-tube boilers. It was only decided about a month ago that we were going to use water-tube boilers.

Now we have no suggestions to make. We have been in the boat business, tugs, barges, etc., for 40 years, but we are new in the ship-building end.

Mr. HURLEY. You have not delivered any ships as yet?

Mr. DOULLUT. Not yet.

Mr. HURLEY. When were you to launch ships?

Mr. DOULLUT. In the latter part of August, four ships to be completed about the same time. The fabricating material is coming for the four ships together.

Mr. HURLEY. What is your thought as to the actual cost of the ships when they are all finished—roughly?

Mr. DOULLUT. Well, I am not prepared to give any figures, Mr. Hurley, but I don't feel that at the price of building ships there is any money to be lost. I think we will pull out all right.

Mr. HURLEY. Do you think you will make a profit?

Mr. DOULLUT. Yes, provided, of course, we build the whole eight ships, because we have got a good deal of experience on our first four ships.

Mr. HURLEY. You buy the engines and boilers, of course, outside?

Mr. DOULLUT. No, sir; we buy them through the Shipping Board.

Mr. DILKE. I want to correct what I said about the possible cost of our ships. Just guessing, I think we have reason to believe that after the first two we can get the cost a little below \$200. I think we will get our costs well below \$200 per deadweight ton.

Mr. JOHN C. PEW (of the Sun Shipbuilding Co., Chester, Pa.). I am a little new in the game, so I may not use the right expression, but I will go ahead and tell what I can.

The Sun Shipbuilding Co. was organized and was about complete when the United States went into the war. We had at that time a complete shipyard, I believe, of five ways, a boiler shop, and we made our own engines. After the war started we spent about \$1,000,000 additional at the suggestion of Mr. Schwab and other officials of the Fleet Corporation in building a second wet dock, in extending our machine shop and boiler shop, etc.

We have about \$7,500,000 in the bare plant. We have, as you know, only contracts for four cargo boats. The rest of our boats were requisitioned boats. We have to-day in our wet docks three cargo boats that are transferred—changed to transports. We have on our ways four tankers and one cargo boat. We have three cargo boats yet to build that are 90 per cent fabricated in our shops, or better.

We feel that we could get business when the matter is settled so that the general public who are inquiring will know just what the Government is going to charge them for the boats if they sell them. That seems to be the question. You talk to a customer and he wants

to know what the Government is going to do. He says: "If I can buy a boat cheaper from the Government than I can from you, of course I am going to buy it from the Government." And that seems to be one of the questions to-day, and that is what we are rather interested in.

Mr. HURLEY. Have we any money in your yard?

Mr. PEW. You loaned us—we had to put in some money—\$2,000,000. We paid part of that off, probably \$200,000. I don't know the exact amount—I mean I am not carrying that in my head.

Mr. HURLEY. You are planning to pay all that back?

Mr. PEW. We expect to pay it back.

Mr. HURLEY. On ships you are now building?

Mr. PEW. I don't know whether we will quite succeed in doing that or not, but we expect to do it in time. They have a mortgage on the plant for \$2,000,000.

Mr. HURLEY. What do you figure those ships will cost, Mr. Pew?

Mr. PEW. We have built about five different kinds of ships, and no two of them are alike. They have probably cost anywhere from \$175 to a trifle less than \$250 a ton.

Mr. DONALD. You mean for the tankers?

Mr. PEW. No; I mean for the Luckenbach boat, which is now a transport, our most expensive boat, twin screw, a 14½-knot boat and a very high class cargo boat.

Mr. DONALD. Of course she would be more expensive than the ordinary cargo ship.

Mr. PEW. Considerably more expensive than the cargo boat; yes. We do feel that we are improving our conditions; that our costs are going down, and we believe they will go down.

Mr. HURLEY. What is your thought regarding the Government selling ships and at what price they should sell them? We would like to get your personal view on that.

Mr. PEW. My thought is that the Government should sell these boats at a cost that they could be duplicated for to-day. If they sell them for less than that they will shut down the shipyards. In our case, unless we get some business and the Government makes some decision, we will have our fabricating shops shut down the middle of next month, for we will be through with the Government work so far as that is concerned. In fact, at the fabricating shop we have cut down our force now, and we will gradually cut down the force all over unless the public buys or the Government buys.

Mr. HURLEY. Supposing the Government offers ships for sale to private ship operators at cost and they did not purchase, then what steps should be taken?

Mr. PEW. At cost, you say?

Mr. HURLEY. I say, if the Government offers ships for sale at a price, say, about what they cost or some reasonable price.

Mr. PEW. I would think, off hand, that they could probably even sell them at less than the war cost somewhat and still let the ship-builder do business with the general public.

Mr. HURLEY. Yes. Well, we will say we offer them at a lower figure than that war cost, and the public doesn't buy; what position are we in then? Then what should we do? I am just looking for information, you know.

Mr. PEW. I don't know, Mr. Hurley; I wish I did; but I don't think the Government should offer these boats at such a figure below the present cost of replacement that they would shut down all the shipyards in the country, have a great many men idle, and have a great many people who have been running these shipyards and who haven't obtained anything yet in the way of a return on their money. I don't believe any of them have. The plant may be worth a little more and may be worth a little less when they get through with them, but I don't believe any of these people have ever made any money out of the business, and to keep this going—to keep the men working—they will have to sell them at about the present-day cost.

Mr. HURLEY. What is the present-day cost? That is what we are trying to find out.

Mr. PEW. I don't know exactly, because no two boats are alike. You ask for the present-day cost on an 11½-knot boat, and it would be one price; on a 14-knot boat it would be another price. I am not sufficiently versed in the shipbuilding business to answer that question. There are men here, I presume, that do know. But I know in our own case there has been quite a difference in the cost.

Mr. HURLEY. Yes; there is no doubt of that. We recognize that.

Mr. PEW. What we are anxious to do is to have some decision so we can keep on going. Mr. Haig just suggested that we had eight boats canceled a little while ago. Of course, I don't know whether those will come back or not. If the Government continues in the shipbuilding business we would like to have those reinstated.

Mr. HURLEY. What size were they?

Mr. PEW. 10,300 and 10,500-ton boats. They were tankers the whole lot—84,000 tons, Mr. Haig says; the same size as our cargo 10,000 tons—the total amount canceled was 84,000 tons.

Mr. HURLEY. We are very much obliged to you, Mr. Pew.

Mr. E. B. SADTLER (engineer for the Oscar Daniels Co., Tampa, Fla.). We are building ten 9,500-ton steel ships, designed similar to those built by the Texas Co. in Bath, Me. We have seven keels laid, two boats overboard waiting for machinery, and the third ready to launch, waiting for propellers. We were delayed very much at the start getting our material, and after three months of work on the contract we had our engines changed and the people we were told to make the contact with by the Shipping Board promised to send the engines in October for the first delivery, and the first one has just arrived there now—part of it. It is not all at the yard yet. The second one we hope will be along inside of a month. The ship has been overboard a month waiting for it. The first ship has been overboard nearly three months, and the third ship is ready to go overboard as soon as we get propellers for it. It has been held up owing to a change in the propellers. They were bronze propellers and it took some little time to get them. The blades are cast and are in the shop now being worked, and we hope to have them before very long so that the third ship will then be overboard. The fourth will be ready to launch as soon as we get the third out of the way, and the fifth is close behind that. The sixth and seventh, which have only had their keels laid since the first and second went overboard, are not so far advanced.

We have material for all ships in the yard, and a large portion of it fabricated—a large proportion for the ship. Beyond that there is not so much. We have had to slow down our fabricating shop and only have about half of the working force because we can't take care of the material outside.

We think we have made pretty good progress considering the amount of holding back we have had from various sources, and the constant changing—as has been referred to before—in our plans, constant additions, mostly small items, but they all take time; and due to the fact that we are so far in the South it takes some little time for our plans to be approved, and we can't make very rapid headway on that account.

Our production in the yard is getting along very much better. We were very slow at the start because we were in New York. We leased the yard from the Tampa Shipbuilding Co., and they had two 3,500 steel ships on the ways which had been commandeered by the Shipping Board, and they were three or four months later in getting them overboard than they expected when we took the yard—which interfered with us. Their ways were too small and we had to build new ways, and we built four ways, and then were urged by the Shipping Board to build a fifth, which we did. Now we have them all occupied and work going along, we think much more happily than it was earlier. Our force is fairly well organized now, and is working harmoniously, and while our present ships are costing us more than we think they ought to, we feel that we can reduce the price somewhat in the future.

Mr. HURLEY. How much are these ships costing?

Mr. SADTLER. We don't know exactly, because of the fact that we haven't yet completed one; but my personal opinion is that it will be close to \$200 a ton for the first. I think we will get below that later on.

Mr. HURLEY. Have you spent any money in housing?

Mr. SADTLER. None whatever.

Mr. HURLEY. How much have you put into the yards, your corporation?

Mr. SADTLER. We have put everything into the yard, practically. I think there has been an advance of \$250,000 on account of the contract from the Shipping Board, but the yard is entirely financed by the owners. That money, I understand, is to be paid back or taken out of the payments.

Being a leased yard, of course we only have the equipment there. We had to double up a number of tools, increase the number of shops and put in a great deal which was not in the yard, in order to meet the requirements of the Shipping Board, such as fire prevention and matters of that sort. We put in five new ways and new derricks to serve them, and all new docks with the exception of one. There was one dock there that belonged to the owners of the yard.

We think, considering the circumstances, we are making good progress, but when I speak of that price of completion of the ships, it is dependent on completing our contract, under which the keels for three more ships are yet to be laid. The next ship, however, is ready to be laid and will be laid as soon as we can put this ship overboard.



Mr. HURLEY. When do you think you will finish your entire contract?

Mr. SADTLER. That is problematical. If we are going to be delayed as much as we have been on our engines, it is a very difficult thing to say. The boilers have been changed also for several of the ships; we think they will be furnished more rapidly now. We have them in three ships now, and the fourth, which has been changed to a different type, is to be shipped to us very shortly.

I am afraid there will be delay on the engines. They are being furnished by a Birmingham firm that never built engines of that size before, and they were turned over to us by the Shipping Board, and we were directed to make a contract with them. Their work has been very slow and a very great deal of it which came down had to be sent back for corrections. The result is we have been very much delayed in that respect.

Mr. HURLEY. It looks more encouraging now?

Mr. SADTLER. It does now; yes. We have got a first-class marine engineer watching everything at their plant now, and I think we are going to get better results. This first engine, as I say, is mostly in the yard now being installed, and if we get them one a month hereafter, that will regulate about how soon we will get through with the contract. I don't think they can furnish them much faster than that. They say they can, but, judging by previous experience, I doubt it.

Mr. HURLEY. What are these, reciprocating engines?

Mr. SADTLER. Reciprocating, yes. We started out with turbines, but owing to delay in getting the turbines the Shipping Board directed us to put in reciprocating. They are water tube boilers.

Mr. WILKINSON. Is that an old yard or an entirely new yard?

Mr. SADTLER. The yard was built, I think—started about two years previous to our taking an order, to build boats for running up the Hudson river. They never built but that one steel boat. Previous to that they had two 3,500-ton steel ships contracted for by private parties, sold to the Cunard Line, and commandeered by the Shipping Board. That was the Tampa Shipbuilding Co. When we took the yard it had about half the capacity, about half the number of tools that it has now. We built five new ways. We are not using any of the old ways; they are too small and too slightly built. In fact, only one there was up to 300 feet and the other one was still smaller and very slightly built and couldn't handle a ship of any size.

Mr. HURLEY. How much money have you in the yard as a whole?

Mr. SADTLER. I am not prepared to say, Mr. Hurley. I am only the engineer of the concern, and am not thoroughly familiar with the financial end of it. I think, however, in the neighborhood of \$700,000.

Mr. HURLEY. Mr. Hunter, have you anything to say?

Mr. H. C. HUNTER (secretary of the Standard Shipbuilding Co., Shooters Island, N. Y.). We have a contract for ten 9,000-ton, what we term "merchant type," ships similar to those being constructed by the Merchant Corporation, Bristol and Newburg.

Our yard has five ways, with full capacity for fabrication, machine-shop work and outfitting. These ships were fabricated by the

American Bridge Co.—straight bodies; practically 85 per cent of the fabrication is done by the American Bridge Co., and the balance done in our yard. We have the material for all ten ships in the yard except for certain outfitting equipment. The fabrication being done by us is practically completed. We expect to finish that entirely by the 1st of July.

We have one ship ready for delivery, one will be launched this week, and two others as fast as we can get the ways from under them.

The reason for the development in that particular way, four ships coming along so nearly together, was due to the fact that the fabrication by the American Bridge Co. was in units of four, so that the material was all delivered practically at the same time—that is, four in each division—and our work naturally went forward as that material was received. We have tried to work away from that as much as we could in order to bring the development along more in line with the possibilities of individual development, but it has been difficult to separate the work. We expect now to have the last keel laid August 1, and to complete the delivery of these 10 ships by the end of the year.

We had an additional contract for six ships of the same type which has been suspended. The material for these six ships was in the process of fabrication by the American Bridge Co. at the time of the suspension.

The cost per deadweight ton probably will run approximately \$200, as nearly as we can now figure it.

Mr. HURLEY. How much money have you in the yard?

Mr. HUNTER. The yard is a new yard constructed entirely for the emergency. We have side launching with five ways and an outfitting berth that will take care of four ships at one time.

Mr. HURLEY. How much money have you invested in the yard?

Mr. HUNTER. The plant was entirely financed by the Emergency Fleet Corporation under a lump-sum contract. There was an advance made of 10 per cent at the time of the contract, and progress payments made from that time on. We have ourselves advanced certain moneys necessary to carry on our operations. The Emergency Fleet Corporation has a mortgage on the plant which is to be reduced as the ships are delivered, in proportion.

Mr. HURLEY. The Government owns the entire yard?

Mr. HUNTER. The Government has a mortgage on the plant. That mortgage is to be reduced as the ships under contract are to be delivered.

Mr. HURLEY. But it was financed by the Government?

Mr. HUNTER. Yes.

Mr. HURLEY. Thank you very much.

Mr. W. T. SMITH (of the Chester Shipbuilding Co., Chester, Pa.). We have already gone through the process of adjustment, Mr. Hurley, as the result of a proposal made by us in December.

We had at the time the Emergency Fleet Corporation was created 30 contracts, under which we have delivered 10 boats. The adjustment made in December set a price of \$150 a ton, in which there was a calculated profit of \$10 a ton. The boats are running about that in cost—about \$160.

Mr. HURLEY. \$160?

Mr. W. T. SMITH. Yes, the adjustment was made as a result—the contract prices on which we were requisitioned varied from about \$80 a ton up, and the adjustments were made by precise calculations as to the exact difference in cost between the estimates and what the cost was running as result of the various Macy Board rulings. So we figure we have already gone through that process of adjustment, having anticipated your request now.

Mr. HURLEY. Do I understand you to say that of the ships you are now building—you delivered 10; you have got 20 more to deliver, all of which were requisitioned ships, and you are building the last 20 on the \$170 a ton basis?

Mr. W. T. SMITH. All of them.

Mr. HURLEY. The entire 30?

Mr. W. T. SMITH. Yes.

Mr. HURLEY. At the flat price? Have we any money in the yard?

Mr. W. T. SMITH. No; certain demands had been made prior to that time by the Emergency Fleet Corporation, but it was invested in inventory, and that inventory is held in your name and not in ours until it is applied to the boats and credited against the contract price.

Mr. HURLEY. What class of ships are you building?

Mr. W. T. SMITH. 9,000 tons.

Mr. HURLEY. All of the same size?

Mr. W. T. SMITH. No; we had both tankers and cargo ships. We have now laid down four of the standard boats similar to what we are building at Bristol, with differences in equipment which came as a result of different purchases. Otherwise the boats are similar in type and installation. There has been invested in the yard about \$5,500,000.

Mr. HURLEY. That is your own money you have put in?

Mr. W. T. SMITH. Our own money; yes.

Mr. J. M. WILLIS (of the Baltimore Dry Dock & Shipbuilding Co., Baltimore, Md.). May I ask Mr. Smith if that \$160 and \$170 he is speaking of doesn't refer to his requisitioned price?

Mr. W. T. SMITH. They are all requisitioned.

Mr. WILLIS. Ships where the price was obtained for material and auxiliaries before the war?

Mr. W. T. SMITH. Yes; practically all the material was purchased before the entrance of the United States into the war.

Mr. HURLEY. You purchased material at very much lower prices?

Mr. W. T. SMITH. Very much lower prices; yes, sir.

Mr. H. B. WILKINSON, of the Toledo Shipbuilding Co., Toledo, Ohio. And the difference is about \$45 per ton.

Mr. W. T. SMITH. About \$20 a ton.

Mr. WILKINSON. And on auxiliaries about \$15 more, about \$30 or \$35 more.

Mr. W. T. SMITH. No; I am speaking about the material when I say the difference is about \$20 a ton. That includes engines, boilers, and plates.

Mr. WILKINSON. The difference on four of our requisitioned ships will run about \$30 to \$32 a ton on what we paid as to what we are paying to-day.

Mr. HURLEY. He said \$20 a ton included engines, boilers, and plates.

Mr. W. T. SMITH. I think also that the volume of our business may have had something to do with that, because some of this was purchased for 15 boats. Naturally we got all the advantage on that volume of purchase. And they were not bought on time.

Mr. J. M. WILLIS. Were not a lot of these ships complete, where you are giving this average cost, before the advance in wages?

Mr. W. T. SMITH. Only two of them.

Mr. WILLIS. But on a number of them you had done a great deal of work?

Mr. W. T. SMITH. Yes; we laid the keels of some of them in the early part of 1917.

Mr. HURLEY. But most of your increased cost of labor is going into these ships now to help make this high price.

Mr. W. T. SMITH. Well the scale has been going steadily up, and as we have laid down the different boats the same rate of wage has not applied to any two of them.

Mr. HURLEY. Well, you have got a third of them finished. When did you deliver the 10, the last five?

Mr. W. T. SMITH. Two in 1917 and eight last year—seven last year and one this year so far.

Mr. HURLEY. Well, up to the last part of last year you probably had lower wages?

Mr. W. T. SMITH. Up to the 1st of October. The decision of the Macy Board in October increased the cost of the labor obviously by the difference in the rate and reduction in the hours. It is also true that during 1917 and 1918 we worked  $9\frac{1}{2}$  hours instead of 8.

Mr. HURLEY. But the 20 that you are now finishing up, on the increased wages—how much of the material of the last 20 you are building had been purchased in 1917?

Mr. W. T. SMITH. Probably half of it at least.

Mr. HURLEY. And the other half you got the regular prices on?

Mr. W. T. SMITH. Yes, it may be interesting in view of Mr. Carse's statement that they were the first conceivers of the fabricated ship to say that before he went into the business the Chester Shipbuilding Co. had bought the material from the Newark Erecting Co. We don't claim to be the originators of the idea; we give credit to the New York Shipbuilding Corporation.

Mr. PESSANO. May I ask if the material you bought was not all fabricated and delivered to you fabricated?

Mr. W. T. SMITH. Why, the ships that were done in advance of the present time, similar to what we are doing at Frisco, the American Bridge Co., furnished about 65 per cent in weight. We figure about 40 per cent in labor is ours, of fabrication. Now later boats which we are doing at Frisco come from the Manitowac and also Merrill & Stevens. They run about 82 per cent in weight, about 55 per cent in labor hours and fabrication. The material comes to the yard with about 125,000 rivets driven.

Mr. PESSANO. May I ask if you can tell us how much per ton you paid for the original fabricated material delivered?

Mr. W. T. SMITH. I think it was in the neighborhood of \$28.

Mr. PESSANO. That is the answer.

Mr. HURLEY. What part of the 30 ships did you pay \$28 a ton for?

Mr. W. T. SMITH. The first 10.

Mr. HURLEY. But on the last 20 you are paying the regular market price for them?

Mr. W. T. SMITH. Yes.

Mr. HURLEY. So that on the ships you are building now, under present labor and material conditions, you are building for \$170 a ton?

Mr. W. T. SMITH. Yes.

Mr. WILKINSON. How many has he delivered—

Mr. HURLEY (interposing). Just a moment, please. You are building the last 20 with labor and material at the present market prices, and you are figuring on making \$10 a ton at that price?

Mr. W. T. SMITH. Yes; the contract restricts us to that profit.

Mr. HURLEY. Well, what do you do when you make more than that?

Mr. W. T. SMITH. Return it to you.

Mr. HURLEY. Go ahead, Mr. Wilkinson.

Mr. WILKINSON. I would just like to get some comparisons as we go along. We want to be fair.

Now just to give you a thought, we built 12 ships last year, and we gave the Government \$1,200,000. We got \$180 a ton for our ships, 4,000-ton ships, which are nearly all equipped with engines and boilers and all the modern improvements. We paid the highest price for all that material that has ever been known, and the highest price for labor. That is \$180 for a 4,000-ton ship. We have here \$190 that we can see in sight, and the Lord only knows how much more, and I want us to get down somewhere on a basis and see how we compare.

Mr. HURLEY. Now, Mr. Wilkinson, you gave \$1,200,000 to the Government? You mean in taxes?

Mr. WILKINSON. Yes.

Mr. HURLEY. Well, you went to the wrong department. This is where we want that money. [Laughter.]

Mr. WILKINSON. I was waiting for the wind-up, and then I was going to make a suggestion along that line, but I might just as well complete it now.

When you get down to comparison of prices on a plant that has no profit and has returned the Government nothing, but which the Government has put millions of dollars into, as against the plant that has received practically nothing from the Government and has turned the Government \$1,200,000 on 12 ships—that is \$100,000 a ship, which brings your vessels down to \$180 a ton. Now when you come to amortise from that your measly little four or six hundred thousand dollars to put in additional improvements, down goes \$15 more a ton, and we are giving you the ships at about \$165 a ton, so far as the Government is concerned.

Now I agree with you that it is too bad that the money can't be turned in here, and probably can, and if you can fix up any way whereby we can pay that money to the Shipping Board instead of to the Government, I am perfectly satisfied except in this, that I do think that unless the Government gets the money from some source, we probably won't build any ships.

Mr. ROSSETER. \$100,000 a ship on a 4,000-ton ship, that is \$25 a ton, more or less.

Mr. WILKINSON. Yes.

Mr. ROSSETER. Do you recall about what the rate of your tax—what your tax ratio was? Was it 50 per cent or 60 per cent or what?

Mr. WILKINSON. Our tax ratio was about—as I remember, we had about \$350,000 left.

Mr. ROSSETER. I mean your tax ratio. Were you paying 50 per cent or 60 per cent?

Mr. WILKINSON. We were paying nearer 80 per cent—about 70 per cent. Of course the amount of cash, real cash that we had left when we got through was smaller, because we amortized.

Mr. ROSSETER. But this is the point I wanted to get clear in my mind: If you paid the Government \$25 on a 70 per cent basis, that left more or left \$15 as the manufacturer's profit.

Mr. WILKINSON. Yes.

Mr. ROSSETER. So, therefore, the excess cost which you were paying to taxes and the normal return that the manufacturer would get was \$40 per ton?

Mr. WILKINSON. Yes.

Mr. ROSSETER. I just wanted to be clear on that.

Mr. WILKINSON. Out of that we paid our shipbuilding improvements, because there was added to our contract, as Mr. Pessano has told you, the difference between—the amount which made up the profits; or, in other words, the agreement with us was that we should put so much per ton into improvements, so that on the basis—I am giving the whole profits, the gross profits, not the profit after we amortized or took out the amount, so we did not have \$15 left so far as the company was concerned, but we did so far as percentage was concerned.

Mr. ROSSETER. I would like to make clear that my question was not at all critical. I was just endeavoring to be helpful more than anything else.

Mr. WILKINSON. I understand. I am only sorry that we could not have kept the difference between \$1,200,000 and what we put into the new improvements. Then we would have had a fair percentage for the stockholders, but had we not put it into improvements the Government would have taken it anyhow, so there will be no regret, because we couldn't help it.

Mr. ROSSETER. Such figures are very interesting to me when we come back to the question of relative costs in America and Great Britain on this point of amortization and taxation and plant allowance and items like that. That will come very prominently into comparison of British costs and American costs.

Mr. HURLEY. It is very important. Mr. Smith, on your \$10 a ton profit you have to pay out of that your percentage to the Government?

Mr. W. T. SMITH. Yes; that is the earnings of the company without regard to the tax law. We will pay a percentage on that.

Mr. HURLEY. And you have figured on that? The point I am trying to get is this: On the line Mr. Wilkinson has been developing we are trying to get the facts about the situation as a whole; what the Government is doing to you men and what they are doing to the industry when they are forcing shipbuilding to pay this heavy toll. That is what we are trying to get at.

Mr. W. T. SMITH. I don't confuse the question of cost in our relation to the Government.

Mr. WILKINSON. Did you have any taxes to pay the Government on \$170, if you please?

Mr. W. T. SMITH. That remains to be seen.

Mr. WILKINSON. That is what I was contending, Mr. Hurley. If they built three ships on an investment of \$15,000,000 for the Government I don't see how they are going to have very much taxes to pay the Government, especially if they lose a couple of million.

Mr. W. T. SMITH. We are not going to cross that bridge until we come to it.

I am also here representing the Merchant Shipbuilding Corporation, Bristol, Pa.

Mr. HURLEY. We will be very glad to hear from you about the Merchants.

Mr. W. T. SMITH. There, of course, we are in the capacity of agents, and figure rather that the fee we get is for services rather than for profit. We contracted to design and build the plant and organize a working force and build the vessels for which we contracted. We have done the two first and are now doing the second. We have laid down 22 keels and have launched 10 and delivered 7.

Mr. HURLEY. I think it would be a good idea if you would outline what the yard cost and how much you have got in and how much the Government has got in. I would like to have all those things brought out.

Mr. W. T. SMITH. The plant cost about \$14,200,000.

Mr. HURLEY. How many ways?

Mr. W. T. SMITH. Twelve. We also have a service shop and do considerable manufacturing of machine parts ourselves—fittings, etc.

The plant was originally owned by us and we had started in on our program when this question came up. We then turned the property into the Government and received a rental for it and went on and constructed a plant on that property.

The cost has varied from about \$212 a ton down to \$182 a ton, making an average of about \$175. It is consistently going down.

Mr. HURLEY. Do you allow a fixed charge on your investment?

Mr. W. T. SMITH. No; no charge for depreciation or amortization.

Mr. HURLEY. Well, if you don't allow any of that, of course your prices ought to be low. What about your housing?

Mr. W. T. SMITH. It is your property, you see.

Mr. HURLEY. I understand.

Mr. HENRY R. CARSE. I think that was explained, that the agents in charge have accounts furnished by the Fleet Corporation.

Mr. HURLEY. I am not questioning that. I know about that, but I want these other gentlemen to know the facts, too.

Mr. W. T. SMITH. We have on hand at the present time, manufactured and raw material to the value of about \$20,000,000, all of which has been converted and handled and is in the average cost which I gave you. So the average to-day doesn't truly express the cost of the vessels completed to-day.

Mr. HURLEY. What investment have you in housing?

Mr. W. T. SMITH. A little over \$6,000,000.

Mr. HURLEY. Is that in the original figures?

Mr. W. T. SMITH. No; that is separate from the plant and is handled by your Housing Division.

Mr. HURLEY. You have got over \$20,000,000 invested in the plant as a whole?

Mr. W. T. SMITH. And the town, yes.

Mr. HURLEY. Are there any questions you would like to ask him, gentlemen?

Mr. WILKINSON. You are building 30 vessels?

Mr. W. T. SMITH. Forty. We have a contract for 60, 20 of which have been canceled so far.

Mr. H. A. EVANS. I think that some people here are not quite clear about that \$160 cost yet, and I would like to put it to Mr. Smith this way. Were not these ships contracted before you were interested in the Chester Shipbuilding Co.?

Mr. W. T. SMITH. Yes.

Mr. H. A. EVANS. Were they not contracted at prices of about \$80 to \$90 per ton?

Mr. W. T. SMITH. Yes.

Mr. H. A. EVANS. Which would have bankrupted the concern if they had to carry those contracts out? They would not have bankrupted your concern, but I mean there would have been a very large loss, and the Government came in and adjusted the contracts.

Mr. W. T. SMITH. The boats were taken at a very low cost per ton. The material also for the boats was at a very low cost per ton.

Mr. HURLEY. On 10?

Mr. W. T. SMITH. Yes, and there is some doubt in our minds, due to the lack of data as to just what they estimated their labor to cost as against what our actual experience is. But the point is that we took all of the contracts that we had on hand at the time; we took everything which was possible. The estimates which we use for the future was our existing experience. In other words, we simply projected, figuring that it would not get any worse, and it is not getting any worse. Of course we are getting the advantage of our foresight, and I expect Mr. Hurley would like to hear something favorable at the meeting as well as unfavorable.

Mr. HURLEY. Yes. We have requisitioned a great many ships from many yards, and in doing so we changed the contracts to meet new conditions as they developed on account of the war, and this is a favorable adjustment, taking into consideration the present price that we are paying for many of these ships. That is the only thought. Are there any other questions you would like to ask, Mr. Evans?

Mr. EVANS. Those contracts were taken well below the market?

Mr. HURLEY. That doesn't enter into this question here at all. If he got them at \$10 a ton in 1917, and on the 20 that he is now building he bought material at the present market price, and the labor cost him the same and he is building them for \$170 to us, why it doesn't matter what happened in 1916 or 1917. He is the fellow that has confidence in his ability to finish them under present conditions. A paper contract doesn't amount to anything; it is the material and labor going into it.

Mr. W. T. SMITH. Another factor which I think Mr. Evans is overlooking; I made the statement that we had received certain advances from the Emergency Fleet Corporation for which they had a certain



value in money. All of the parts of these vessels are manufactured in series, which is obviously the cheaper way to manufacture than to manufacture for one boat at a time. That is our claim as to the superiority of the standard ship from the price standpoint, and we believe it is true.

Mr. HURLEY. That is a manufacturing proposition.

Mr. W. T. SMITH. Yes. Now there has been some statement made about changes made in the contract about which I would like to ask you. There are a good many changes, Mr. Hurley, by the corporation and, as you know, the same interests have an operating organization. We are sometimes at a loss to understand just what these changes express in policy. We can see where some changes are desirable, where a corresponding increase in operating cost after the boat is delivered is going to enter into it, but at the present time changes seem to be a little bit sporadic and not quite under control. We think that might be modified a good deal, because in the standard ship any change you make you never can recover in cost.

Something was also said about costs going up. We have found costs going up since the 1st of October, due to the fact that we have got 12 ways at Frisco, which absorbs a certain amount of overhead. Obviously you can finish boats quicker by a proper and discreet use of overtime or any other means that appeals to you, and the overhead absorbed by that boat would be considerably less than under the present arrangement. There is a distinct going down in getting them under precise control, which is a difficult thing to do.

Mr. HILL (of the Cast Steel Ship Corporation). We are just negotiating to build two ships, and the price probably will be of interest to the shipbuilders in this country. We are contracting to build the hulls of two 11-knot cargo ships, 10,000 tons, for \$70 per deadweight ton for the hulls alone for the first one and \$65 for the second one; and we calculate a very wide margin of profit.

We want to help the American shipbuilders as far as they would like to have us do so, and from that point of view I thought I would make a very brief statement.

Mr. HURLEY. Where is your plant?

Mr. HILL. We have no plant at the present time. We are just negotiating to put up a plant for certain private interests to build these ships, and then turn it over to the private interests and retire from the actual shipbuilding ourselves. We are naval architects.

Mr. HURLEY. Don't you think we have got enough plants here now without building any more?

Mr. HILL. Well, the plants are all right, but your costs are way up, and there is where we hope to help. If American shipbuilders want to get down to a point where they can compete with the foreign builders, why we can help by our process of shipbuilding.

Mr. HURLEY. That is the cast steel?

Mr. HILL. The cast steel, yes.

Mr. W. DOWNEY (of the Downey Shipbuilding Corporation, Arlington, Staten Island, N. Y.), We have a contract and are building ten 7,800-ton, 10½-knot boats, our own design, and we are 85 per cent completed. Six of them are launched and seven will be launched this week, and if there are not too many changes introduced we will deliver the last ship in September.

Mr. HURLEY. Deliver it or launch it?

Mr. DOWNEY. Deliver it. Including all of the excess costs—that is the excess wage costs and all of the alterations, changes, etc.—and we have a tremendous amount of that—based upon what we know of, about 85 per cent of the physical, actual cost, and estimating the balance, we think the ships will cost the Fleet Corporation about \$192—possibly \$193—per ton dead-weight.

Mr. HURLEY. You have four ways?

Mr. DOWNEY. Four ways, yes.

Mr. HURLEY. How much money have you invested in the property?

Mr. DOWNEY. My associates and I furnished \$900,000, and we have borrowed \$750,000 from the Fleet Corporation on a five-year mortgage.

Mr. HURLEY. Is that all the Emergency Fleet Corporation has in it?

Mr. DOWNEY. That is all the Emergency Fleet Corporation financing that has been done for us outside of our regular shipbuilding contract. We made the contract and took a regular first payment on a shipbuilding contract, and instead of furnishing a surety bond, a contractor's surety bond, we paid for our property in toto, free and clear, and then we gave the Fleet Corporation our own bond, a contractor's bond, secured by mortgage on our property, and that bond is being liquidated pro rata as the ships are delivered.

Mr. HURLEY. You are referring to the \$750,000?

Mr. DOWNEY. No; the first ship payments. We gave a bond for that, a performance bond secured by mortgage on our property.

Mr. HURLEY. A first or second mortgage?

Mr. DOWNEY. A first mortgage. That was secured by a first mortgage. That is a security mortgage. Then, in May of last year, when Mr. Schwab came with the Corporation, he was very much interested in the quality of ships that we were building, etc., and he assured me that the Fleet Corporation would want us to do a large amount more of shipbuilding, and he asked me what we could do to help, and I told him that if we had to do more than the 10 ships we had already spent about \$1,400,000 in the plant in additions, and I told him we needed about \$750,000 to round it out and balance the plant for a ship a month. So he loaned us \$275,000 on a straight 5 per cent mortgage on the property.

Mr. HURLEY. Is that all the money the Emergency Fleet has in your plant?

Mr. DOWNEY. That is absolutely all. We have worked along with our own money and contract money; we have spent probably all of our possible profit in that contract in our shipyard additions, and we have progressed to a point now with a good plant, and we intend to refinance and refund and pay back the Fleet Corporation in toto.

Mr. HURLEY. When do you figure you will finish, in September?

Mr. DOWNEY. We will deliver our last boats in September. Mr. Hurley, without a doubt, barring some abnormal conditions.

Mr. HURLEY. How many ships have you delivered?

Mr. DOWNEY. Three, and the fourth will go within the next week, and the fifth will go about the same time, and the last in September.

It may be of interest, Mr. Hurley—I am deeply interested in the success of the United States in shipbuilding, regardless of my own interest, and I am in hearty sympathy with your attempts, the

attempts of the Shipping Board, to try to ascertain what the real cost of ships is and what we are going to be able to do in the future. Now, predicated upon our experience with this shipbuilding contract, I may say—and it is beyond question—that the starting—take a group of 10 ships, the first one of our 10 ships has cost unquestionably 25 per cent more than the last one of our 10 ships, and I am confident that if I had 10 more duplicates of that ship, I could go on and reduce those costs very materially. And on the subject of the efficiency of men now, as against what it was when we started, and against what it was in January, building up a new shipbuilding organization—that is, the personnel—is fearfully expensive at the start. But this is interesting: We received our first steel in November, 1917. It was very late. Now by January, 1919, I received a record from the Fleet Corporation, Production Department, informing me that our yard had been the most efficient on the Atlantic coast in the matter of production per man. That was in January of this year. In March we had practically finished all of our fabrication of the 10 ships, and our fabricating department was going dry. The men had been looking forward to additional shipbuilding contracts; and not having them they saw the plant, the work, dying down. Now the efficiency of those men in January was way up and splendid, but since that, owing to the fact that they saw the job petering out, the efficiency has been going down again very much. Now the other day I contracted for 11 ships from private owners, American owners, and just the fact that that contract is closed has started the men up again with a very visible improvement. So that these costs we talk about are regulated largely by the amount of duplication we can do and the continuous employment of the men. If the men see ahead for months that their job is secure, you will have a more efficient organization. Seventy-eight per cent of our men were greenhorn men in shipyards; had not been in a shipyard two years ago, and are doing splendid work, and in January they got up to an efficiency superior to anything I have seen in a shipyard in old days with regular shipyard mechanics.

Now on the matter of competition between American and the United Kingdom on ship costs, I don't know what the shipyard costs are in the United Kingdom, but I had a visit from an English banker and shipowner about two weeks ago, and he spent half a day in the yard and was greatly interested. He owned nine ships prior to the war. He lost five of them in the war and said they wanted to contract to build back the fleet again, but he told me—and I think he was perfectly frank and truthful about it—he said he couldn't get any definite price from a responsible English shipbuilder. He said that the only thing he could do was to get cost-plus contracts, subject to so many possibilities that he didn't dare to close a contract to fill up his fleet and was just letting it drift along. Now so far as I have been able to make a study of what little information we can get in the world generally regarding ship cost, the present and possibilities of the future, I don't believe that a good ship, a good normal ship, is going to sell for very much less in the next three years than what it is costing now. That is my belief. Of course there is a difference in cost of ships and quality of ships. The type of ship alters the tonnage price \$15 or \$20 a ton easily, and the quality of

ships—for instance, the Submarine Boat Corporation with merchant steel and a straight ship and a great number of duplicates should be able to build that ship for very much less than the normally designed ship built to the full requirements of British Lloyds or American Bureau of Shipping. And it is a most interesting study, and I congratulate the Shipping Board on this attempt to get together the shipbuilders and develop the truth. I would like to see the truth on the table all the time.

The shipbuilders are entitled to a fair profit, and I think that is all they could ask, but I do believe that if they keep on in harmony and common sense that there is a very good possibility that we may be able to compete with the United Kingdom. I think that their condition, Mr. Evans, has gone up very much more than we think. This English shipowner and banker told me some things rather from the inside that do not at all appear on the surface, and when he saw one man punching a big ship plate in our plant he said as he looked at him: "We can't do anything like that; we would have a gang at that." Instead of one man punching a ship plate in England you would probably see three or four or five men around that plate. Now, where the individual is getting less money, therefore there are so many more individuals that I believe in the ultimate analysis we are punching that plate cheaper than they are. So all of those things are valuable, and I would be glad, Mr. Hurley, at any time to do anything I can to help in this program.

Mr. HURLEY. Mr. Downey, on your figures there you say you only have \$750,000 of the Government's money invested in your yard. These figures show you have had advanced or loaned \$3,255,000.

Mr. DOWNEY. Mr. Hurley, we closed a shipbuilding contract with the Fleet Corporation at \$155 per ton, and we received a first shipbuilding payment, just the same as the Norwegians would have paid us—only 5 per cent less. The Norwegians prior to that had been paying 25 per cent upon a single contract; the Fleet Corporation paid us 20 per cent upon a single contract, and we gave them a bond—a performance bond—and gave them a mortgage on our property to secure that performance bond. That has always been mistaken as money that the Fleet Corporation loaned us. That is not a loan.

Mr. HURLEY. An advance.

Mr. DOWNEY. It was the first payment on a shipbuilding contract, for which we had to make good or lose our property under the bond.

Mr. HURLEY. Well, you brought that up and I just wanted to ask you that question.

Mr. DOWNEY. I am glad to have it understood, because it has been gossiped around that the Fleet Corporation has loaned us that enormous amount of money. The Fleet Corporation simply made us that first shipbuilding payment, the same as I would have gotten from the Cunard people if I had closed a contract with them, as I was prepared to do. The only money we have received from the Fleet Corporation is \$750,000, and that is secured by a mortgage on a New York City property that was appraised the other day by the American Appraisal Co. at \$6,080,000. And the Fleet Corporation will receive all that if we don't pay.

Mr. HURLEY. Well, I don't want to go into that part of it.

Mr. CARSE. I might say, the vessels that are being built by the Submarine Boat Corporation are rated by Lloyd's and the American bureau at the highest rating given to any ships.

Mr. DOWNEY. That is very interesting to know, and satisfactory to me. Now, then, if we could get Lloyd's and the American bureau to give any shipbuilder, or the Fleet Corporation or the Shipping Board, the highest class on a ship built of Merchant's steel, we could build ships cheaper than we are building them now. No doubt about it. So anything that can be done toward substituting Merchant's steel and a straight designed ship instead of the orthodox designed ships—if that can be accomplished, that will reduce the cost very much.

Mr. H. G. SMITH (manager Bethlehem Shipbuilding Corporation (Ltd.), Wilmington, Del.). I haven't a great deal to say, Mr. Hurley. It seems to me that most of the points I had in mind have been pretty well covered.

We are operating, as you know, five yards, and our work is, or a considerable percentage of it, Navy, and some of the yards—three of the yards—exclusively Emergency Fleet, and the other two more than 50 per cent Navy.

The statistics of contracts on hand and the exact status of each contract are filed with the Shipping Board each month. My recollection is we have about twenty-odd contracts not yet completed for the Shipping Board, work on which is progressing very rapidly, material being on hand for practically all of them.

The one thing that has come up in the discussion here to-day that impresses itself upon me very firmly is the argument in connection with possible reductions in cost. I don't want to deceive myself, and I wouldn't want to deceive the board into any possible error as to my opinion on reduction in costs. It is my very firm belief that there is no possibility of expecting quick and large reductions, dating from the time of the signing of the armistice. The reasons, the elements affecting costs have been pretty clearly outlined. They start first with labor and material. As we all know, the labor, if anything, is a little higher on account of adjustments than it was a few months ago. The material has fallen very little. Now labor and material are elements that are beyond our control, and as I see it, considerably beyond the control of the board. The item that affects the shipbuilder, and in which he can effect a saving, is of course greater efficiency, but that affects labor only, and there is only a certain degree to which he can sow, and that can be brought about only with time. It can not be brought about suddenly, as you must gradually develop on a different basis from the bases you were on in war times.

There are three other very important elements that have been mentioned here affecting costs, elements that are absolutely under the control of the Shipping Board, and those are the elements of changes, inspection, and the rumors of cancellations.

This question of changes is one that I have dealt with for many years in Navy contracts, and there is no question in my mind but that if you insist on changes you are going to increase enormously the cost of your vessels, for two reasons: First, on account of the increased cost due to the change itself; and secondly, on account of the

disorganization that results in your force. And one way to affect a great saving is to say: "Here is your ship; go ahead and build it exactly in accordance with the plans."

The other element of inspection is one that very seriously increases costs if we are not careful. That has been very thoroughly discussed by Mr. Downey and others, but it is a serious matter in connection with costs. Assume that during the war period your ships were good and that they are giving entire satisfaction in operation, and assuming that in gradually increased efficiency the shipbuilder himself is turning out even a better ship in peace times than he did in war times, you are gradually obtaining through the shipbuilder that particularly increased efficiency, and if you add to it close and minute inspection upon the part of the Shipping Board itself, you add a large element to the cost, because you are going to slow down production, and you are going to increase the cost in consequence thereof.

The third matter, one of cancellations, is one that has been pretty thoroughly discussed, and it is a very disturbing thing, this uncertainty in various yards as to whether they can complete their contract, whether their job will last to complete all the contracts that they have, or whether ships are going to be canceled and they are going to be thrown out.

I think those are about the only points I have in mind.

Mr. HURLEY. Mr. Smith, you made the statement that the question of efficiency depended entirely upon labor. You didn't mean by that that you can't increase efficiency anywhere else?

Mr. H. G. SMITH. Now, I mean in the increased results that we can get with labor; increased efficiency if you carry it through the machinery or the material. It is labor that is involved in getting that increase. I mean it is through the management—I mean by labor, starting with the manager from the top down.

Mr. HURLEY. Yes, that is what I am trying to get. It is fifty fifty. If you have an inefficient management, no matter how efficient your labor is, you don't get results.

Mr. H. G. SMITH. Absolutely.

Mr. HURLEY. You made a statement, Mr. Smith, that the question of price—that is quoting the prices by foreign builders, that they would not reduce it materially—that is, they could not afford to reduce it. Do you know of any prices that have been quoted by foreign builders that are very much lower than the prices that we are paying?

Mr. H. G. SMITH. I am not familiar with the prices that have been quoted. I have heard a great many rumors of all kinds of prices, but I don't know of my own knowledge just what prices have been quoted.

Mr. HURLEY. I mean by American shipbuilders to foreigners.

Mr. H. G. SMITH. I don't know.

Mr. HURLEY. That is all, Mr. Smith.

Mr. DOWNEY. I might supplement my statement by just confirming the impression regarding great delays and great additional costs, because of unnecessary changes and drafting inspection. Those are not necessary to make a good ship. My judgment is that our ships on an average will cost about \$75,000 more because of unnecessary

changes, and we are undoubtedly months and months behind in finishing ships because of that.

Mr. H. A. EVANS (of the Baltimore Dry Dock & Shipbuilding Co., Baltimore, Md.). Our capital stock is \$1,100,000; \$500,000 preferred, \$600,000 common, \$254,000 bonds. We had a well-organized repair plant with two buildings, a good organization, and capable men. The time came when there was an urgency for ships, and we thought with the organization we had that it was our duty to get into the shipbuilding scheme in a large way. We also thought that it was a good opportunity to make a profit. We went to Gen. Goethals and put the proposition up to him, and he promised us sixteen 8,800-ton ships, which at that time was the favorite. He stated that he could not enter a contract for more than eight, because he had promised the committee that he would not go beyond a certain date; but that he would enter into a provisional contract if Congress authorized him to go further. The provisional contract for the eight was drawn up, but he declined to sign it, saying that he could not sign a contract like that, that he was advised by the Legal Division not to sign it, but that we would get the eight additional ships.

On the basis of having 16 ships we went into the new plant. We have put all told—the part of this that I am giving you includes the additions made for the large oil tankers—\$4,800,000.

Mr. HURLEY. That is plant investment?

Mr. EVANS. Yes, sir. Real money. We have four ways in the new plant, one of the most modern plants in the world, everything built substantially of steel and concrete.

Our eight ships were taken on the basis of \$158 a ton with protection both on steel and labor. Of those eight we have delivered six, and one will be launched on the 31st, and another one about the middle of June. We would have advanced much more rapidly in these contracts except for the fact that we had a large amount of repair work. Employing as many as 3,500 men, the number of men available was limited, and Mr. Schwab directed—as Mr. Ackerson knows—that we keep men on the repair work as it was more important than new work.

We then entered into a contract later on, when the demand for tankers arose, for twelve 10,500-ton tankers, and six 6,000-ton tankers; 12 at the new yard and six for the old yard. These contracts required material addition to our ways, our plant, the lengthening of the ways, additional air compression, additional pipe lines, additional pipe machines, and so forth. We have two of those tankers on the ways now; the third over 3,000 tons fabricated at the head of the ways, and two of the 6,000 tons on the ways, and a large amount of the two next tankers fabricated. The Emergency Fleet Corporation has suspended on us six of those twelve 10,500-ton tankers, and two of the 6,000 tons.

At the present time I know—and I think that everybody in this room knows—that there is a very great demand for tankers. We hope that we are going to get some of those tankers reinstated.

In our old plant within 40 days we will be out of work. I don't mean that the plant will be shut down, but I means that we will have to lay off men out of our fabricating shop in the lower plant. We can go quite a little bit longer in the new plant. On the letter that

Mr. Hurley sent out I assume that that was a general letter, because most of the provisions did not apply to us. The revision of commandeered contracts—we had two contracts at \$116 a ton that were commandeered. We didn't ask the Fleet Corporation to take those over at cost-plus; we took our medicine and lost money on both of them.

Mr. HURLEY. Did you make any claim?

Mr. EVANS. No, sir; because we have later contracts that there were very much profit in, and the \$116 one we just threw into the fire.

The Government has nothing invested in our plant. The appraised value of our old plant, appraised by Day and Zimmerman about two years ago, was \$2,500,000—two million four hundred thousand dollars and some odd. In the new plant we have put in \$4,800,000.

Mr. HURLEY. Additional?

Mr. EVANS. Additional.

Mr. HURLEY. \$6,500,000 altogether?

Mr. EVANS. Yes, sir; more than that, \$7,500,000.

All of our contracts are lump-sum contracts. We absolutely refused to take any cost-plus contracts. There is a fixed price, but there is the protection on labor.

Now the cancellation—first the suspension that we had, and then the newspaper talk of further suspensions and cancellations has hurt our working force a very great deal. The efficiency of our men after the armistice was signed increased materially. I don't mean that we were getting up anywhere near what we should have had, but it increased materially. When this talk of wholesale suspension came out—for example, when the order went out to suspend work on all ships whose keels were not laid, we would lay off in seven days between 4,000 and 5,000 men. The men knew it, and instead of being at their work now they are discussing among themselves what is going to happen. That has reduced our efficiency. We hope that very soon some action will be taken.

Mr. HURLEY. There has been no action taken toward suspensions or cancellations.

Mr. EVANS. No; but I mean the newspaper talk. I think that covers everything I have.

Mr. HURLEY. What were your prices on tankers and cargo per dead-weight ton?

Mr. EVANS. We assumed first on the tankers that they were going to be about \$10,300; but, as a matter of fact, they run over that. It will be less than \$220. It is something less than \$220, depending what that tonnage is. It will probably be about \$215 a dead-weight ton. The small tankers are higher. They run about \$230.

Mr. HURLEY. What about the cargo boats?

Mr. EVANS. The cargo boats were \$158—the flat price. Now I have heard various shipbuilders telling here what the ships were going to cost the Fleet Corporation. I don't know how they can do it, because we can't. We have these large number of changes, many of them—not through any fault of the Fleet Corporation, but partly our fault in getting in the estimates late, being late in doing the paper work, and there have been large number of changes, and ships that we should have delivered six months ago have not yet been settled. It is just through the machinery we were late in getting the



estimates in, but we can't tell what those ships are costing the Fleet Corporation until those things are settled. More than that, when you asked costs, I assumed you meant everything, overtime—everything. We have only in the last two weeks settled our overtime claim. About two weeks ago, so that we know how much we were going to get; how much the Fleet Corporation was going to pay, so I can't give you any idea of what those ships actually will cost the Fleet Corporation.

Mr. HURLEY. Take the \$158 contract price, and add to that what would be the overtime and increased cost of labor.

Mr. EVANS. The increased cost of labor, and more than that there was added to that the advanced price of steel. The Fleet Corporation didn't buy the steel at the price that was put into our contracts.

Mr. HURLEY. They did not?

Mr. EVANS. No, sir.

Mr. HURLEY. You bid \$225 on the tankers?

Mr. EVANS. No sir; it is about \$215.

Mr. HURLEY. For the large tankers?

Mr. EVANS. For the large, and \$230 for the small ones.

Mr. HURLEY. And all flat prices with labor and material guaranteed?

Mr. EVANS. There is no material guarantee. They simply stated that they would furnish the steel at a fixed price, that is all, which was  $3\frac{1}{2}$  cents then. There was no material guarantee.

Mr. HURLEY. Are you having that same trouble that Mr. Wilkinson has had about paying too much tax to the Revenue Bureau?

Mr. EVANS. We are paying our share.

Mr. HURLEY. Well, are you paying so much that it affects the cost of producing the ships?

Mr. EVANS. Our repair work, Mr. Hurley, is so large—we run a very large amount of repair work—sometimes having as many as 3,500 men on repair work, and it is a fact that the larger part of our profits are made out of repair work.

Mr. HURLEY. Of course your accounts are kept separate?

Mr. EVANS. Oh yes, the accounts are kept separate, undoubtedly. Then a large amount is made out of foreign repairs. I have had that fully analyzed by outside accountants and turned over to Mr. Piez, and I think it has been given to Mr. Ackerson, for their personal information, not to be used officially at the present time, giving every contract that we have—our repair work for the Government, our repair work for American private owners, repair work for foreign owners, and full analysis with the labor, material, overhead, amortization, revenues, profits and losses; and when you put in that you must write off this \$4,800,000 plant except for the scrap value, and within two years you don't show a profit.

Mr. HURLEY. Have you any suggestions to offer regarding how we could cooperate with the Treasury Department about working out this problem of paying the high taxes?

Mr. EVANS. Well, I think, sir, it is going to be a very serious problem. Of course, you can't do it legally now, but aside from that here is the fear that the shipbuilder has. Suppose we put in our tax returns this year and they accept our statement of writing off, say, \$2,000,000 or \$1,500,000. Suppose we made some settlement with

you on that basis. Now, they have accepted it; it is passed, we have paid our taxes. The law allows them three years to come back after we have got this all settled, and they can come back and say: "This plant is worth a good deal more, and we won't allow you that."

Mr. HURLEY. Do you think it is fair to the shipbuilding industry, and the operating feature of our American merchant marine, where we are trying to work out a shipbuilding problem and a ship-operating problem, for the Government to come in and take an enormous percentage of the returns, forcing the shipbuilders—which they have to do—to keep in a measure their prices up for construction, and in turning his ships over to the operators at a high price and forcing them to operate in competition with other nations?

Mr. EVANS. That is not the way to build up a merchant marine.

Mr. HURLEY. That is what I want.

Mr. EVANS. That is not the way to build up a merchant marine.

Mr. HURLEY. That is the reason I thought we might get an expression on that.

Mr. EVANS. But we paid in taxes last year, where we had not started—we have not taken a profit up to December 31 on a Government contract; any profits that our company has made has been from requisitioned ships where we had contracts with foreigners, and from repair work. We paid something like \$700,000 in taxes last year.

Mr. HURLEY. I am thinking more of the future than I am of the past.

Mr. EVANS. It is 80 per cent with us, sir, owing to our low capitalization—approximately 80 per cent.

Mr. HURLEY. It doesn't strike me as being equitable for us who are all trying to work out a problem and then having the Government in one particular branch hold us back.

Mr. EVANS. I quite agree with you, sir. I would like very much if we could have some of those suspended contracts back, because there is a demand for tankers.

Mr. HURLEY. Could you get an order for some of those suspended contracts from private owners?

Mr. EVANS. Some private owners through some one else. I am telling all my business here.

Mr. HURLEY. Certainly, that is all right.

Mr. EVANS. They came to me last week and said: "It is going to cost the Government a very considerable amount on the present suspensions—which it will—I mean not the ones suspended at the present time—it is going to cost the Government a considerable amount per ton." This private owner was very much surprised that we could make delivery of a tanker in 9 months, and he said: "Why don't you go to the Fleet Corporation and see what you can settle up those suspended contracts for and get what you can out of it, and maybe we can meet and take the rest." I said: "No, I would rather for them to settle it. You go to the Fleet Corporation and see if you can take over those contracts." But Mr. Ackerson, probably has enough preliminary figures to know that if these suspensions and cancelations went any further it would cost the Government almost as much for every ship, and you wouldn't get any ships.

Mr. HURLEY. What is your thought, Mr. Evans, in the direction as to how long the Government should stay in the shipbuilding business?

Mr. EVANS. That is a very bad one, Mr. Hurley. I believe that with our plant, if we had a chance for two years longer, we would be able to find contracts abroad that would keep us going. In other words, it would be known that we can increase our efficiency; we know that our men are learning. More than that we are getting a splendid spirit in our yard, and if I was assured of work for two years, I believe that we could go it along with the foreigners. I don't mean that we can build ships as cheaply as they can; there will be enough demand for ships to fill them up, and then give us something. We won't make as much profit, but, Mr. Pessano, you have studied this very carefully, do you think that is so?

Mr. PESSANO. I agree with you.

Mr. HURLEY. Do I understand you to say that you feel that the Government should continue building ships for two years in order to get these organizations going so that later they could compete with foreign countries?

Mr. EVANS. No, sir; that was not exactly what I said. I did not answer your question directly. I simply said that I felt in our yards, if we could continue now. Now, as a matter of fact, you, representing the Government, made with the shipbuilders an absolute ironclad contract. There is no cancelation clause in it. You are breaking—now understand this is not criticism of anybody—

Mr. HURLEY (interposing). No; go ahead.

Mr. EVANS. You are breaking an ironclad contract; we are breaking a contract which you put me under bond that I would not break; then you go and break that ironclad contract. While the United States Government simply promises the wheat growers that it will pay \$2.25 for his wheat, and although it is going to cost millions and millions, they are going to keep to it, but the shipbuilder is treated differently. Now, I believe that these contracts, these absolute contracts made by the Government should be carried out.

Mr. HURLEY. What percentage of the contracts that we made with the shipbuilders were later revised upward in order to meet new conditions?

Mr. EVANS. You made none with the Baltimore Dry Dock & Shipbuilding Co.

Mr. HURLEY. I am speaking generally. Are you speaking as to what should be done for all the shipbuilders, or just for the Baltimore Dry Dock & Shipbuilding Co.?

Mr. EVANS. No, sir; I am only familiar with my own company, I don't know what the conditions were with the other shipbuilders.

Mr. HURLEY. How many contracts did we cancel with you?

Mr. EVANS. We have had suspended six 10,500-ton tankers, and two 6,000-ton tankers.

Mr. HURLEY. How long ago were they suspended; five or six months ago?

Mr. EVANS. I don't think it was as long as that. Do you remember, Mr. Ackerson?

Mr. ACKERSON. In January or February.

Mr. HURLEY. Mr. Mull, we would like to hear from you.

Mr. J. H. MULL (of the W. Cramp & Sons Ship & Engine Building Co.). I don't think, Mr. Chairman, it would be fair for me to comment.

We are running 100 per cent Navy work. I don't think our condition is in line with what the gentlemen here present have said. I don't think it would be fair for me to make any remarks, but if I can have a copy of these proceedings I would like to study them for the general interest. I don't think that any remarks that I could make would be of value.

Mr. HURLEY. We will be very glad to furnish them. I was going to say, gentlemen, that our thought is to print the proceedings here and distribute them to each man here, so that he may know all the facts, and if he has any criticisms to make, make them promptly, so we can make the corrections before they go to the printer.

Mr. MULL. I might say one thing, however; the business we have done with the Shipping Board has been the finishing up of commandeered ships. We delivered the last one on Saturday. We haven't a kick—no doubt you have, and if you have I would like to hear it now.

Mr. HURLEY. That is a ray of hope. [Laughter.] Mr. Brush, we would like to hear what you have to say.

Mr. M. C. BRUSH (president of the American International Shipbuilding Corporation). Of course, you know, Mr. Chairman, that we are a Government agency. Our own investment is in the property and the only reason we have an investment in the property is because the Government was not allowed to buy property at the time the contract was made. Our company therefore holds the property in cooperation with the Government. At the moment of purchase turn over to the Fleet Corporation, or the Shipping Board, an option on the property at actually what it cost; therefore we have an investment of about a million and three-quarters in the land, about 846 acres, and there is a provision in the contract that after completion of the contract, if the Government sees fit, they may take this land at the actual purchase price; and if the Government doesn't see fit, they may either sell what they have on the land to our company or take it away.

We have an original contract for 110 7,500-ton ships and 70 8,000-ton cargo ships, since which they have been changed from cargo ships to troopships, troopships to combination passenger and cargo ships, and then to troopships and back and forth, until to-day we stand, so far as the 70 ships are concerned—the history of the B ship is a very interesting history, Mr. Chairman. A very expensive history to the Fleet Corporation. It has cost you a great deal of money, your B ship program, up to this minute.

On January 31 we received a suspension order on the last 20 of the last 35 of the 70 B ships. About two or three weeks later we received a suspension order on the next 5 of the last 35 or the B ships. A short time after that we received a cancelation of these 35 ships. On the 29th day of April we received an order to suspend all work on these ships then on the ways, of which there were 12, up to that time our instructions having been to make 6 troop, 6 combination passenger and cargo ships. We were directed at the same time to notify outside vendors or contractors to suspend their work on the remaining work of the 23 of those 35; and we have not yet been notified nor has a single contractor supplying material for those 23 ships received any information since the 29th day of April, that we are not likely to use

this material and that material is being prepared and the Fleet Corporation is paying for it, and we are awaiting instructions.

We received a letter about a week ago directing us to resume work, after a space of about 10 days or 3 weeks, on these 12 ways—resume work on the ships on the way, with the further advice from the division manager, Mr. Higgins, that he would let us know later about the remaining 23 ships. Of course the suspension of that work on those 12 boats is a very serious matter to us, so far as our esprit du corps in the yard is concerned. There was immediately a rumor that all the ships in the yard were going to be canceled and we had exactly the same result that all of these other gentlemen had, the result of newspaper comment. In that case, however, it was because we were directed to stop work that night. At 5 o'clock we arranged to take some 5,000 men and try to distribute them over the other 38 ways, which we did. We put some of them on night work. We didn't let any of them go. But the rumor that all ships were to be canceled necessarily prevailed and had a very disquieting influence. At the end of a week or ten days we were directed to resume work on those 12 ways. We have undertaken to do so, but it will take several weeks to get back to the pace we had at the time of the suspension. So far as A ships are concerned, 110 A ships, we have delivered our 18 A ships, a perfect ship and a satisfactory ship to the operating division of your board. We have launched our twenty-seventh. We will deliver our nineteenth to-morrow and launch our twenty-eighth to-morrow at 9 o'clock; and on the 1st day of June we will have launched 24 of those ships and delivered 22.

The 7,500-ton ship according to the contract is now a 7,700-ton ship, as specified by the American bureau. They have measured the ships and the lowest rating they have given is 7,704 tons, and the highest 7,880 tons.

Mr. DONALD. You mean of the A ships?

Mr. BRUSH. Of the A ships. Instead of 7,500 tons they are 7,700 tons and over.

Of the 17 ships delivered up to Saturday afternoon, when we delivered our eighteenth ship, we have the most favorable reports from your own operating division, both with respect to the functioning of the ship and with respect to the earnings which those ships have made while being operated. As an incident of what the ships are doing, so far as satisfaction is concerned, the second ship, the *Sacarrappa*, made approximately half a million dollars for the Fleet Corporation from Rio to harbor a month ago. The *Quist Conck*, about which there has been so much conversation, has never sunk, has never been in dry-dock, nor has a single ship of ours ever been in dry-dock, and we have a satisfactory report from the inspection of the *Quist Conck* that the ship is fairly satisfactory to you, and to the master in every respect.

We also have a letter from your Fleet Corporation representative that the *Saugerties* was the first ship delivered to the Fleet Corporation which upon return from a trial trip under Government contract, without any corrections, or changes or repairs to be made of any character, was accepted immediately upon her return from her trial trip.

We also have a communication from one of your captains to our own operating man to the effect that the ship which he is operating is, in his opinion, a perfect ship.

I think we should endeavor to make clear, Mr. Chairman, that we are not old line ship builders; that we do not pretend to be, nor so far as I am concerned, nor so far as I have knowledge, do we intend to be in the future. We were created for the specific purpose of building 180 ships, and I assume that when that is completed the disposition of the property will be subject to whatever the Fleet Corporation desires to do, they owning everything on the plant other than the actual plant. We are building the ships on a fee basis, not on a percentage basis, and while allowances are made for changes in fee due to increases, decrease in material or increases in labor, etc., the fee is substantially fixed, being a normal maximum and minimum fee above and below which we can not receive any sum.

I assume that in all of these basic stages which I have heard you gentlemen discuss—and I will frankly say I am not a shipbuilder, and I have learned more about shipbuilding since 11 o'clock this morning than I ever knew before—I assume from my knowledge of some of these contracts which I have had the privilege of reading in the past eight months, that in all these flat-price contracts per ton, allowances have been made for both material and labor and overhead increases. So far as our cost situation is concerned, it is absolutely impossible for us to give you a figure as to what it is costing per ton, due to the fact that we don't know what our overhead will be, and we won't know until we know what is going to happen with the B ships. We don't know whether we are building 30 B ships, 12, or 7. We are perfectly frank to state—we have stated in public before—that we regret very much that the B ship was ever placed in the Hog Island yards. The yard is a quantity production fabricating yard, and while I am not a shipbuilder, I am engineer enough to be able to assemble steel according to blue print, and that is all our job is.

The B ship has been a very serious matter to us in a great many ways. Unfortunately, due to the pressure of the Fleet Corporation—which was legitimate at the time—the B ship was scattered in among A ships. It is unfortunate for a superintendent who is trying to build ships on a quantity production basis to have an 8,000-ton ship and a 7,500-ton ship beside it, as we have known in our halfway yard, 5 B ships and 5 A ships. It is defeating in the yards, as evidenced by our own records, the very purpose that the yard was originally created for, and that was a quantity production yard. In our yards 1 and 2, in which we have 10 A ships each, our showing, from all that I can learn, compared with other shipbuilding plants, is as fine as anybody could possibly expect. In the other three yards we are handicapped by that mixed type of vessel.

We have delivered the equivalent—or will have delivered on the 1st day of June—the equivalent, approximately, of 170,000 tons, and we assume that our job is not dissimilar to quantity production, whether it is air guns or sausages or automobiles or anything else, and our success in getting these ships down to a proper price lies in our being able to do the same thing over and over again.

Of our 110 A ships, as I say, we will have delivered to the 1st day of June, 22, and launched 34, and will have laid keels for 38 more,

the remaining 38, the ways of 12 being occupied by B boats. For the remaining 38 ships the material is practically all on the ground, or on the way to the plant. That deals not only with the actual steel but with the auxiliary apparatus.

I think it only fair to say for the Fleet Corporation also that from the time we started the *Quist Conck* away from the pier, up to this minute, there has not been the slightest trouble in any way, shape, or manner with a single movable part of the ship. The turbines, gears, boilers, auxiliary apparatus, has been absolutely perfect in every respect. The gears and turbines are purchased by the Fleet Corporation and delivered to us. I would like to say, if I may be permitted with all my limited experience, that the subject of changes is so much more serious with us, in my opinion, than it is with any of these gentlemen, that it is a matter of tremendous expense to the Fleet Corporation and the Shipping Board. We had ready this morning the eighteenth ship. We got a receipt for her Saturday. The nineteenth ship had her trial trip Friday. She came in and we would have gotten our receipt for her Saturday noon had they not decided to put some railings around the hatches. After we had delivered 18 ships, Mr. Hurley, according to specifications and blue prints, including the eighteenth, there has been 900 changes to those ships since the 1st day of January. We had 14 ships launched when we were notified by the local representative, Mr. Higgins, that he had decided to dry-dock 14 ships in order to lower the intake 5 feet. I told Mr. Higgins frankly that if he did, the American International Shipbuilding Corporation might just as well quit building ships that minute, because we would be explaining the rest of our lives why the first 14 ships we launched had to be dry-docked. Therefore he waived that on the 14, but made me commence on the fifteenth ship on the way, hull 208, and go to work and lower the intake 5 feet; and never once have we heard a single word from the first 14 ships delivered in regard to the intake being too high. That has cost you thousands of dollars.

We receive orders to make changes in these ships, Mr. Hurley, within 15 minutes of the time we are ready to deliver them. Now I don't think that is good judgment for you. It don't cost us a penny, but it costs you a good deal of money. My best judgment is that you haven't made a change on a ship since we started that hasn't cost you \$500; because it isn't a question of what these gentlemen are doing on one ship, sending 25 men down there to change it; we have got to go back and make over 500 drawings if we change a hinge on a door. It is quantity production. If we change the color of paint on a panel, it is 500 drawings, and it costs a great deal of money.

Now that comes as the result of somebody who is operating the ships seeing something which he likes a little better, and it comes down through to us without anybody stopping and saying: "Now wait a minute; is this for the best interests of the Fleet Corporation, or is it not?" And it comes down to us rubber stamped in our local office down there by our local representative, and goes direct to the engineering department, and the wet basin man, Capt. Bookwalter, is notified to make such and such a change. I think it is a very, very serious matter.

Now if we have delivered, as we have, 18 ships, and your operating division says that those ships are perfectly satisfactory, and your own captains have written letters saying that the ships are thoroughly satisfactory, then if I owned the Emergency Fleet Corporation this afternoon I would say to Hog Island, "You duplicate that eighteenth ship, and don't you make a change of any description unless something comes through where it concerns the safety of the vessel." And I can't possibly, Mr. Chairman, make our position too strong, because we want to make a record for the delivery of our ships, and we can not do it if to-morrow Tom, Dick, or Harry can come running down to the ship and say: "I would like to have a hinge changed," because that is just as bad as changing a steam pipe.

We took out of a ship here the other day about 50 pieces of pipe down in the bilge, because the specifications, according to this man, said the bottom of the pipe should be within an inch of the bottom of the bilge, and he went down and found that it was an inch and an eighth, and we held the ship three days to take those out, and the ship is worth \$2,000 a day to you, and it cost you \$6,000 and didn't cost us a penny. And God Almighty couldn't tell you to-morrow whether it was an inch or an inch and an eighth.

Now, if the Fleet Corporation—if I may make a suggestion with all due respect—if they will forbid us to make a single change that Commander Ackerson does not sign in long hand you would save hundreds and hundreds of thousands of dollars.

Mr. HURLEY. We will straighten that out in short order. Thank you very much.

Mr. C. W. STINER (of the Saginaw Shipbuilding Co., Saginaw, Mich.). I just want, Mr. Hurley, to explain—I think it has come up, and I think it is quite clearly shown that there are no two cases alike.

Now, if I don't say anything it may be assumed that somebody else has told our story for us, perhaps, but we are a new concern. We were organized in 1917, after a conference with Gen. Goethals. We had with us—or were able to bring into a company—men who had had the shipbuilding experience. We also had in our locality large shops where we could get not only our plant equipment but the equipment for ships as well, in the way of boilers, engines, and practically all of the auxiliaries. We came down and talked to Gen. Goethals, and he strongly urged us to go home and organize a company and get into the business, and told us that just as soon as we could make a proper showing we would be given contracts. We did that, and we came back and we were given a contract for six ships. Now, we had no experience available and no data of any kind, but we did the best we could, and we were given a price which we understood was the going market price with the Fleet Corporation at that time, which was \$160 a ton for the first six ships.

We had to get an organization together. We had nobody. We started in and established schools of training for men. We conducted those schools for months. We began the building of our plant—this was early in October, 1917, and we carried on ship construction just as soon as we had a few men operating. We started building ships and we have delivered the ships. We didn't make any money on them, but we didn't ask for any revision of the contract price.



In January we were given another contract for 6 ships at a much lower price than others were being paid at the time—which we knew afterwards. We were working on those, and in May, 1918, we were asked how many ships we could take on additional for 1919 with our equipment as it was outlined at that time, and we replied that we could take on 6 additional ships with those two contracts we already had. Then we were asked how many ships we could take on if we put in large improvements in our plant. We considered the matter and felt that we could, by making large extensions to our plant, more than double our plant, we had the room—we could take on 12. We were asked to go ahead and make these improvements, and were given a contract for 12 ships at the time, at the price that other builders were getting at that time. We went ahead and we have spent over a million dollars in the extension to our plant to take care of this last contract. Now we have been asked to suspend the work on the last 6. We did not make any money on our first contract, and we hoped under our last contract to get some of the money back that we put into additions to our plant at the request of the Fleet Corporation, but now we are asked to suspend. Our contracts had not been canceled but they are in suspension. The last 6 of the last 12.

Mr. HURLEY. What type of ships are they?

Mr. STINER. Four thousand tons.

Mr. HURLEY. Where did you say you are building?

Mr. STINER. At Saginaw, Mich.

Mr. HURLEY. How much is the Government's investment in the plant?

Mr. STINER. The Government hasn't anything. The Government in the last contract gave us, or agreed to give us, an extra \$15,000 per ship over the base price of \$800,000 a ship.

Mr. HURLEY. Your investment was for war purposes?

Mr. STINER. We put in an investment for war purposes. That would be \$180,000 if we got it, but we spent over a million dollars to do that.

Mr. HURLEY. And the contract was canceled, and the money you were to get on the ships to be put into yard expenses you are not going to receive. I mean that \$15,000 a ship?

Mr. STINER. Well, we are not going to get it according to the contract, if the contract is canceled.

Mr. HURLEY. Well, you ought to get that. That is not fair.

Mr. STINER. But the small amount of the contract provided, or gave us, for these improvements that we are paying to carry out this contract, and which the Fleet Corporation admitted at the time would be of no value to us after this emergency is over, is over a million dollars.

Mr. HURLEY. I don't care anything about the amount, I am speaking of the principle of the thing. If the Government told you to construct 10 ships, and allowed so much on each over and above the price for which you were willing to build it to apply to building the yard, and then canceled the ship after you invested in the yard, it is not equitable or just for the Government not to take care of your yard. That is the point.

Mr. STINER. We have never gotten to that. We have never had it up with the Fleet Corporation or anyone. We just had notice to stop work.

Mr. ACKERSON. Those points are all being taken into account.

Mr. HURLEY. I just wanted to let him know our position.

Mr. STINER. I think the record here is going to be something you can base your judgment on, and I wanted to get that into the record.

Mr. HURLEY. We will now hear from Mr. Brittain, of the Terry Shipbuilding Co., and then Mr. Rosseter, the Director of Operations, will address the conference.

Mr. H. L. BRITAIN (of the Terry Shipbuilding Co., Mobile, Ala.). I represent the Terry Shipbuilding Corporation, and also the Mobile Shipbuilding Co. Mr. Chairman, speaking for the Mobile Shipbuilding Co., the original contract given to the Mobile Shipbuilding Co. was for 18 composite ships, given under Gen. Goethal's régime at a price fixed by the Corporation, and based on contract No. 1, which was of a similar type, there being no other method at that time to figure on the composite ship cost.

In June of the following year the Government canceled 12 of the composite type ships, and substituted therefor 12 5,000-ton all-steel vessels. Subsequently we were asked to take the Jahncke Shipbuilding Co.'s (Inc.) contract of 12 ships of the same type, 5,000-ton ships, on which contract the company is now working.

The six composite type ships have all been delivered. All of them are in service and are bringing in revenue to the Corporation, I believe, of \$2,500 a month.

Our last composite ship never returned from its trial trip to our yard. It was accepted by the Fleet Corporation, by the Division of Operations, I believe, and by the various agencies and by the charterer and taken right to their docks and cargo loaded.

That completed the six composite ships that the company was working on, and we are now working on the 5,000-ton all-steel ships. On the 12 ships that were given to us in consideration of the cancellation of the composite ships we have received a cancellation suspension order.

We are launching the first of the Jahncke ships next week, and the second one the week following, or 10 days following and on two additional I think the state of completion is about 25 to 60 per cent. We have had all of the steel fabricated for all of the ships by the Virginia Bridge & Iron Co., of Roanoke. I understand that most of the steel for the 12 ships has been fabricated, and all the steel for the first six is in the yard and fabricated and ready to erect. At the Terry yards—

Mr. HURLEY (interposing). Let us just finish that Mobile yard first, please. How much money has the Government got in that yard?

Mr. BRITAIN. Mr. Chairman, on the first contract, the Government—the first contract on composite ships the Government advanced to the yard \$400,000. Upon the cancellation of the 12 composite ships that \$400,000, which was to be reimbursed out of the last two payments, was put over against the 12 all-steel ships and on the first six that we delivered we have practically canceled the \$400,000, although it was to go over against the 12 that were given us for the 12 that were canceled.

Now then on the 12 all-steel ships the Government in its contract allowed us an advance of \$600,000 for plant extension—the composite yards being more or less a wooden yard you see—allowed us

\$600,000 for plant extension for that contract, making the million dollars; we hadn't paid back the \$400,000 on the deposit. Now, then, when the Jahncke contract came up it developed, I believe, that the Jahncke Co. had an advance from the corporation of about \$300,000. This advance was absorbed by us, of \$325,000 and the corporation allowed us an additional \$172,500 for plant extension, by reason of the increased facilities made it necessary for the building of those 12 additional ships, amount to \$172,500 for plant extension. That would total \$1,500,000 advanced on the three contracts.

Mr. HURLEY. The Mobile yard and the Jahncke yard?

Mr. BRITTAIN. Yes; now based on progress payments to-day, Mr. Chairman, on the number of ships we are way ahead. The payments are more than a million dollars, so our advance up to the present stage of completion has practically been absorbed. We are working on the basis of an impressed fund, as we are building those 12 ships at considerably less than our estimated cost.

Mr. HURLEY. What was the cost?

Mr. BRITTAIN. The 5,000-ton ships were based on the cost price of the Submarine Boat ships, \$960,000 plus and amount of \$20,000 made to us for the plant extension. Our ships, I believe, are a little larger and a little more expensive to build by the way, so that our contract price on those ships is \$980,000. We are building them, however—we put in a detailed estimate of the cost of them, and we are keeping count of our progress. The estimate put in as we have progressed shows that our costs up to the present time are considerably less than we estimated at that time.

Mr. HURLEY. What was your estimate?

Mr. BRITTAIN. Our estimate, put in to you, was \$960,000.

Mr. HURLEY. On a 5,000-ton ship?

Mr. BRITTAIN. Yes.

Mr. HURLEY. And it is going to be below that?

Mr. BRITTAIN. Below that, yes. We are building, erecting, riveting, and fabricating cheaper than we estimated.

Mr. HURLEY. Now in the other yard?

Mr. BRITTAIN. In Savannah our contract there was one of the earliest contracts for composite boats, 20 composite boats. Gen. Goethals named the price on that, which was the same price given on the contract No. 1. These two composites were practically the same price—it was based on contract No. 1, and subsequently 10 of those were canceled in the early part of April, 1918, and we were given in lieu of the 10 composites canceled a contract for 10 oil tankers of 7,500 tons dead-weight. Five of those were subsequently suspended; and we have fabricated the material for 5, and the first keel shows a progress of about 55 per cent, the other about 35 per cent. We are fabricating all of the material in our yard. We have a yard at Savannah with 10 ways and fabricating capacity there of over 3,000 tons a month; a complete machine shop, outfitting wharf, a complete plant both for a wooden yard and for a steel yard, and the Corporation has advanced us on that yard of 10 ways, and a fabricating capacity of 3,000 to 3,500 tons a month, \$1,500,000.

We were allowed on our tanker contract by Admiral Bowles \$1,636,000 for plant extension. I cut that down in the contract that was finally drawn up to half of that, over \$800,000, and subsequently

we voluntarily reduced it to \$600,000, and we have stayed within the \$600,000, the other \$900,000 having been expended for the deposit on the composite contracts so that the corporation has in there \$1,500,000.

Mr. HURLEY. In the Savannah yard?

Mr. BRITAIN. Yes, sir. We have 4 of the 10 composites on the ways, and suspended—we don't know what.

Mr. HURLEY. What was the cost of the first composite ship that was built?

Mr. BRITAIN. Mr. Hurley, in Mobile our first composite ship, the *Balino*, which, I think, was the first of that type or wooden type, to go into trans-Atlantic trade, and got insurance on a million-dollar cargo, cost \$840,000.

Mr. HURLEY. 3,500-ton ships?

Mr. BRITAIN. Yes, about 3,600.

Mr. HURLEY. Where are the Savannah ships that have been built?

Mr. BRITAIN. The Division of Operations, I think, has two or three of them, and one other had been ready for acceptance, and the other two we launched—we were waiting for some changes there, and we launched the fifth about two weeks ago. We will outfit that in 21 days, and that will be ready for delivery on the 21st.

Mr. HURLEY. The composite ships that you delivered, are they in service, or are they tied to the dock? Are they satisfactory?

Mr. BRITAIN. All of the Mobile composite ships—

Mr. HURLEY. (interposing). I mean Savannah.

Mr. BRITAIN. In Savannah we were held up by certain changes and the steering gear had to be changed in practically all of those ships. We had finished our work on two of them in November, and with various changes in them—I don't know whether Mr. Rosseter can recall—I don't know whether the first one delivered has been in service. I just wanted the story in the record.

Mr. HURLEY. These two composite ships, as I understand it, the first two that you delivered there at very high cost, are not in service and they can not be put in service on account of their condition.

Mr. BRITAIN. I think you are confusing us with the Jacksonville yard.

Mr. HURLEY. Well, I may be.

Mr. BRITAIN. Absolutely we have the highest classification on the first two ships, as I understand it, and they already have been accepted and you have not offered them for service. I know an operator who would be very glad to get them because the operators that are using our composite ships in Mobile are very anxious to have that type of ship.

Mr. HURLEY. I know about Mobile, but the Savannah ships I had in mind. I know about the Mobile ships; good ships they are—but I will straighten the record about that.

Mr. BRITAIN. Now six of the composite ships, we had about 95 per cent completed, I believe, and we were instructed not to install engines and boilers in those ships, and they will probably be used as barges. So that is six of the composite, and the four now on the ways you haven't determined yet your policy in regard to those.

Mr. HURLEY. Mr. Evans, I would like to mention a point that you brought out as to the authorizations, if we had not canceled the 1,500,000 tons of wooden ships after the armistice was signed, we

would have been way beyond our authorization instead of being within—just practically within—now. I merely explain that to you gentlemen so that you will know there was a real reason. If we had gone ahead and built the ships and spent one hundred, two hundred, or three hundred million dollars more after the armistice was signed, beyond our authorization, we would have had a pretty serious time in explaining to Congress. So there was method in our madness in trying to keep within the authorization.

Mr. EVANS. I understood that at the time.

Mr. ACKERSON. We would have been away beyond our appropriation.

Mr. HURLEY. We have money now to keep you gentlemen going, but otherwise we would have had to shut down a number of plants, because we wouldn't have had the money.

Mr. ROBERT HAIG (of the Sun Shipbuilding Co.). When our president was speaking of the cost of some of our ships he gave you cost including all the overtime and extra charges. I noticed that in Mr. Sadtler's statement, I think, and others, they did not so include their overtime. Our ships are about 6,000 horsepower, and they run about \$250 a ton. I was looking at some figures on Saturday, and out of that about \$20 a ton is overtime and extras. That was up to about the 31st of December, so that our charges on those ships—they are twin-screw boats, the very highest class—they are too fine to be cargo boats, and many changes have been made in them. I was interested in hearing Mr. Brush speak about changes. He had only two types of ships; we have had tankers, single-screw cargo boats, twin-screw cargo boats, back to tankers, back to cargo boats again, and every one of those ships probably carried, every one of them, an excessive amount of changes. True, it was inevitable, owing to the conditions that we were working under, that changes should come about. But those changes run up the cost and when it comes up to you, sir, you have got to look at the cost of your American ships in comparison to the British ships. Now, I claim to have a fairly close knowledge of the question in British yards. I was trained there and know it very thoroughly. Within the last two or three weeks we have received a number of books sent to us from the other side bearing on the riveting cost, calking, and ship costs, and so on, prevailing in the British yards. I started to compare a few of them, and I thought surely I was getting wrong and had lost track of English money from my residence here so long, and I turned it over to our department to estimate, and I found where we were paying 10 and 12 cents, I think it is, for riveting our angles in the center keelson as she runs up into the fore-castle—where we were paying 10 or 12 cents they were paying 4½ cents. They were paying 6 cents a hundred for running that work up, and we were paying 10 and 12 cents for the same work. Their calking and shipping did not run up into such differences, but it was so marked that I am having it laid out, our cost and their cost, line by line, and I will be very glad to complete it and send it down to you, because it will be illuminating.

Mr. HURLEY. Thank you very much. We will be glad to have it.

Mr. HAIG. That has just come over within the last three weeks, and it is from the most reliable sources because it is from the manager's working book out of three yards; compiled out of three yards

and sent over here. It is not the official book of any union, but it is the working manager's book covering rates charged by the unions, covering certain work. Mr. Evans spoke of the difference in the British yards and here. I have knowledge of them both, but what I would like—and I can not too strongly emphasize what Mr. Smith has said, and Mr. Brush, about the cost of operations now on those big boats. We have had four extra bulkheads put into those ships. Now you can imagine what that means in the dissipation of our work. In another ship we had three main boilers in when we got instructions to put in twin boilers. That meant carrying the ship out and bringing this main boiler through the cargo hole into the stoke hole. That main boiler, I think, cost about three times the cost of the boiler before it was landed in the ship.

Now you can see that, let your organization work ever so efficiently, the price of American ships is going to go up high. They can not do otherwise—unless you do as the British builders do. We have some specifications—no doubt most of the shipbuilders have—of British specifications, and they will not change a thing—they wouldn't change a mooring bit on the deck if it is going to interfere with the run of their work. The president of our yard was over in Europe at Christmas time, in January. He was unfortunate enough during the war to lose a British ship, and his money is lying in the Bank of England, but you can not use it except to build a new ship; and he in conversation with the yard that built the former ship, asked them what they would duplicate it for, and they said they would duplicate it for \$175 a ton. He said, "No, I will not give you a contract. Will you do it for £30 a ton?" They said, "We will build the ship on £6 a ton profit," \$30 off and on—"but we will not enter into a specific contract."

Now that was in January, for a tanker about 8,000 tons dead-weight. But I would just as strongly emphasize at this point, and impress upon you and your board, the necessity of cutting down changes. You may authorize—your board may authorize a change at an initial cost of \$100, but it will cost you \$1,000. You dislocate so much work. You stop that work that is in progress in the vicinity of it; the men get disheartened when they take things out. To-day we have a ship in the docks—I am not complaining, mind you; it is our business to do what you want, and we are not complaining. We have the warmest relations with our Shipping Board and with the Emergency Fleet. We acknowledge the services that they have given us; we acknowledge their readiness to cooperate with us; we acknowledge that in full. But now this ship comes back on her first trial trip perfectly satisfactory, but we get an order within three or four days to raise the stack 16 feet. We were told that our stack tank was in excess of what the requirement was, and we were ordered to raise the stack 16 feet, by the operating division. Now, that doesn't seem much. It meant about five days' work lifting the stack off and then elongating it, but our wireless comes within 20 feet from the top of the stack, and that meant that we should throw away our topmast and rigging, and we put those topmasts up 20 feet. Now you see the initial cost of the stack was very small, but we discovered—we scoured the whole country to get a new topmast and finally bought them from the Emergency Fleet in Philadelphia. But they were hard to get and it cost lots of money. I am only giv-

ing you two or three instances now to show you that if you can eliminate these changes—the British shipbuilders are facing an increasing cost of shipbuilding, there is no doubt about it. The British shipbuilder's cost is not going down; the British shipbuilder's labor is going up. The American shipbuilder's cost is going to come down because his efficiency is improving, and if you can reduce this interference with the contract after it is let and say, "Mr. Smith, there is your contract—there are your specifications and we will close it with you; meet the classification requirements, whatever they are, and we will accept the ship," then you are going to get very much increased efficiency in the cost of the ship, and you are going to get the ship built very much quicker and are going to be able to look the public in the eye and say, "We are building the ship; take it for good or bad, we are all through."

The American shipbuilder turns out a much finer cargo boat than the British shipbuilder turns out—Mr. Donald with his long experience in shipowning will back up what I say, that we turn out here higher class cargo or passenger boats than are turned out in England for the same class of work. They turn out special ships, special work, that we don't touch, probably, but the cargo boat to-day or the passenger boat to-day that was built in England, and the same type of boat built in this country, this country's ship is the better; and if the American shipowner will say, "I want a cargo boat to carry bulk cargo, two-deck cargo boat, shower baths, individual sleeping quarters," then he will get his ship according to the specifications, comfortable for the men, good to navigate, and within the money.

Mr. HURLEY. I would like to ask you gentlemen, is the Newburgh Shipyard (Inc.) represented here? There is a statement given out from some source, not by the press, that they have accepted two orders from the sulphur company at \$175 a ton, the United Sulphur Co. Is that correct? Do you gentlemen know anything about it?

(A portion of the record was here ordered stricken out.)

I would like to hear from Mr. Rosseter now.

Mr. ROSSETER. Perhaps all of you gentlemen know that I have been giving my time and energy entirely to the Division of Operations, endeavoring as far as I can to establish and perpetuate the American merchant marine. Thus I do not come very closely to your construction problems. However, the questions of construction and operation after all are very closely related. In the first place, for successful operation you must have ships which can operate successfully in hard times; a real hard-time ship. A ship that will do well when rates are high and business plentiful may perish under the reverse conditions. So, going back to the days—the happy days—when I was in business life and not in Washington, I remember that the greatest trouble I ever had was to decide on specifications at the time a ship was ordered that would be entirely complete and final. The specifications that were given to the builder—and in those days it was generally a British builder—were as exact, full, and satisfactory, and as final as they could be. Nevertheless, as time went on changes did develop. We always considered a change from the standpoint of how much it would cost and how much would it delay the ship. The cost we got from the builders; the delay we figured ourselves.

Now, I say this because I am tremendously conscious of the importance of complete specifications of a satisfactory ship. Still, you gentlemen know that in the hurry of building our emergency fleet not much attention was given to design, or the balancing of the fleet, nor to specifications or class, because there was no time for it. No one was to blame for that; the problem was to get a ship that could go to sea and successfully arrive at a foreign port.

Having made a great many changes in November last, I can't help but be very conscious of the fact that a good many of these remarks have been directed at me. However, some of the statements are perfectly astonishing and surprising to me. I want to say that I agree entirely with Mr. Brush's statement that any change made should be over the longhand signature of an important official. There is no question about that. Altogether I have dealt personally with not exceeding 50 changes in the entire fleet of the Shipping Board. Whether other changes were made I do not know. If they are made by inspection agencies that discover faults, probably they are well considered, and possibly they are not. But this point I would like to emphasize, Mr. Chairman: It is rather surprising that for the first time I hear of 500 changes having been made. I am very accessible; anybody can come into my office, and nobody has come to me and said those changes have been made. In fact, to tell the frank truth, I had great difficulty in putting over some of the few changes I made. For instance, I will take the case which came up the other day, that Mr. Ackerson knows of, where I wanted a No. 5 double-bottom connected up for fuel oil. I wanted that No. 5 bottom coupled up for fuel oil for the reason that it was not required for fresh water, and by adding this double-bottom to the oil supply it would enable the ship to make a complete European round, without replenishing bunkers. Well, I think it was three days, probably, before that change was ordered.

You know we find some very funny things about ships. Mr. Brush has told you how favorably the Division of Operations reported on the Hog Island ships. That is true. I have been interested to see the "come-back" from our operators and from our supercargoes and from the captains. Nevertheless, it is very fresh in my mind that the first ship that came out, the *Quistconck*, the Navy refused to man and advised me not to accept because she was considered unseaworthy. I sent her to sea, gave her a 36-hour trial, and on my own responsibility ordered her accepted. Little points like that, you know, it is well to bear in mind.

When we come to talk about the cost of a ship, much depends on the type. I was making some figures here a little while ago, going back in my memory. The lowest priced ship that I remember ever being contracted for in England, of a plain cargo type, was contracted for at about \$32 a ton, the price in pounds Sterling reduced at the normal rate of exchange made that ship cost about \$32 a ton. At that very time I ordered four other ships from British builders. I was very familiar with the ship that was ordered at \$32; I went carefully over all of the specifications and embodied some features in my own specifications, but added a good many other features. Three of those ships we contracted for at \$41 a ton, an advance of \$9. That advance in price is not a proper criterion of the cost of building



abroad or building in this country. That has to be considered from the standpoint of efficiency and from the value of the investment in the special features. At the same time a fourth ship I ordered cost \$61 a ton.

Now those ships were not all of the same type, but they were practically of the same type, inasmuch as the \$32 ship was 8,000 tons, the \$41 ships were 9,400 tons, and the \$61 ship was 7,600 tons. So, therefore, you have a spread right away of \$9 between the price of the British tramp and the improved cargo boat which we selected to order; and then again, another spread of \$29 to the high type combined ship, a ship that had some limited passenger space, that had refrigeration and speed, and had a greater steaming radius. Concurrently with that order, or within six months afterwards, we ordered three ships in the United States from Mr. Mull. Mr. Mull will correct my impressions—I am speaking now from memory—but as I recall it we paid \$76 for those ships.

Mr. MULL. That is correct.

Mr. ROSSETER. We paid, I think, about \$15 higher than you would have built a very good ship for us, because we demanded of you a very superior ship. You remember the ship?

Mr. MULL. Very well.

Mr. ROSSETER. Therefore, when you talk about relative British prices and American prices, it is a very misleading proposition. The real analysis of shipbuilding, to my mind, of course, we all know it—is made up of three elements; material, labor, and overhead. We are to-day standing with probably no very great advantage over the British on the point of material, but we have some advantage. I happen to know, for instance, that there is a large order here from England for ship materials, which is ready to be placed, and on which they will have to pay a freight rate of \$20 a ton. That is a cent a pound on steel, practically, and the order is for no less than 60,000 tons. So we do have some advantages, and should have more advantages, on the question of the price of materials.

On labor we have some disadvantages. But the real crux of the question is, how much do you add for overhead? Now, gentlemen, I am not talking about emergency construction or what we did in the past, because all of you men have had to take into account a very serious item for overhead if you expected to do war work and undertake an enormous expansion of your yards, as compared with the British shipyards which have existed for 50 years and have been building up slowly year by year, with the capital cost being either written off or reduced to a very insignificant item.

Now I have asked the opinion of one of the best authorities in the United States—you will pardon me for not referring to him by name—and these are the figures he has given me—Prewar: Labor, \$26; material, \$24; overhead, \$12. Total, \$62.

I reminded him that at about that period—certainly just before the war—a contract had been let with one of the large Atlantic builders for a tanker at \$55 a ton. His answer to that was that those people were facing an initial loss of \$7 a ton on that contract. Well, certainly the cost at that time must have been somewhere between \$55, for which the tanker was contracted, and \$62, which my friend estimated that it was going to cost. Now coming back to this time

he figured: Material, \$65; labor, \$70; overhead, \$32; practically a 270-per cent increase on all three items.

If there is one point that I would like to bring forcibly to the attention of the men in whose hands the destinies of American shipbuilding are entrusted, because they are to-day undertaking that activity, it is the importance of coming to a reasonable basis of overhead. I want to declare here and now that I am seriously and enthusiastically committed to the perpetuation of the industry of shipbuilding in America, but I am conscious—and each of you must also be similarly conscious—that at this moment you are facing a crisis; we are crossing a river, and if this thing is dropped now, if before private enterprise comes in the Government lets go. I don't know what will happen to the industry. We are undoubtedly facing a situation to-day where we have at least a 100-per cent excess of shipbuilding capacity in the United States. One of the first things we must do is to correct this condition. If it means the wiping out of yards, it means, in effect, the reimbursement by the Government of the cost of installation as war work and as war cost, but it should not be handed down to the future and the coming generations as an element of the cost of what we shall do from this day forward. I am not looking backward; I am trying to look forward. All of these troubles that have passed concern me very little. As an operating man I know that if we are to have a merchant marine we must have a shipbuilding industry. As I have said on several occasions with reference to the old conundrum, "Which came first, the hen or the egg," I don't know and I don't care which came first, but I do know that if we are to have a merchant marine, we must first have the ships, and we must be able to build ships in competition with the rest of the world.

We hear a great deal of stress laid on the disadvantages of operating costs. From the operating standpoint I give very little account to that, but I do attach great importance to this—we must have the right type of ship, and on that type of ship the base price—not for the refined ship, however—must be right. You can not expect Congress any more than you can expect private capital to build ships in America at a higher base cost than they can be built elsewhere. I am very glad that Mr. Hurley has given me this opportunity to impress this point on you. I am thinking of this thing day and night. You think of it from your shipbuilding end; if you will allow me to emphasize it, I think of it from both sides; I think of it as an operator, and, as an operator, where am I going to get the ships? As I said before, the right kind of a ship is a matter of design, but the right price is what we must have from you.

We are now here—it is Mr. Hurley's desire, and I think, the purpose of this meeting, to reach a good understanding. So far as I am concerned, and so far as it is within my power, instead of interfering with or adding burdens to the shipbuilders, or making construction more difficult or more costly, I would say, let us go very slowly and decide exactly what we want; put it down in black and white, reduce it to a blue print, and stick to it. But what were we to do when ships which were built for overseas service had a steaming radius of a thousand miles or so, and an initial radius of 2,800 miles was required? Something had to be done about it.

We built ships where the winches were so deficient that they broke down the first time they were started, and every day you tried to work you had to change the winch. There can be no argument about the need for that change. That is what is back of us.

Now if you find any needless changes—Mr. Hurley will no doubt institute a very thorough search of this whole thing, and I shall be glad of it.

Let us get back to Mr. Brush's idea that if we have to make a change, let us analyze it; let us have the order signed in longhand by the men responsible for it. This matter of cutting an eighth of an inch off of a suction pipe into a double bottom of course is the height of absurdity. That is one of the stupid things that will occur, and there must be some appeal from a thing like that. And the heightening of a smokestack—do you know what case that was?

Mr. HAIG. The *Marica*, the steamer *Marica*.

Mr. ROSSETER. Did you ever hear of the change?

Mr. ACKERSON. No.

Mr. HAIG. We are not complaining, you understand.

Mr. ROSSETER. I am glad you brought it up, however, for I want the matter investigated. Don't think I am complaining; I want these things brought out. As I have told you, I haven't dealt with 50 changes in our ships myself. Here I am in my office where certainly enough people come in who have nothing at all to say to me, while you men, who might have something to say do not come in. I shall be glad to hear you.

Mr. HAIG. Probably we will now.

Mr. ROSSETER. I think I am the most accessible man around here. I have been on the job pretty nearly every day, unless once in a while I have cheated a little and gone away for short rests and recreation.

Maybe the heightening of that smokestack was an Army change. Now we come back to another condition. We have had the Army and the Navy changing, and then we have had the Army change the Navy. We have then come into the thing and looked at it and have found those changes were wrong, and have gone back as nearly as we could to the original specification. I want to tell you that every time I have looked at a plan, I have looked at it from the standpoint of, "How closely can we adhere to the original drawing?" I think Mr. Mull and Mr. Riggs will bear me out on that. Mr. Mull went over some plans with me when there was a question of moving the bulkheads, and finally we found a way so that there would be no changes in the bulkhead at all. I know it is a fatal thing to go into the yard and upset everything by asking for changes, but on the other hand if a change is essential, is there anybody here who will not say that the time to make the change is when the ship is being built instead of waiting until the ship enters service? There is no argument about that.

Now, reverting again to the item of ship costs. We hear a great deal about what ships are costing in Great Britain. This same authority that I have quoted before told me that you can authoritatively say that the best price for which a ship can be built to-day in England is £28 per ton (figuring it at \$5, and that is \$140) with a stipulation that the buyer will pay any advance in wages and any increase in the cost of materials, as of the date of the contract, and

also with an understanding that delivery would not be made earlier than a year and a half.

Now the situation in England, as I see it, which is due to the disturbed conditions resulting from the coal inquiry, miners' wages, going up, cost of coal increasing, and thus in turn increasing the cost of train operations, manufacturing, and living; and last of all the very serious effect it has on British shipping, inasmuch as it produces higher costs for their propelling power, as they are resting on coal—places us to-day in an advantageous position. We have an opportunity now, that probably has never before come to a nation, to really perpetuate this industry of shipbuilding. But Mr. Hurley is conscious, as I am, of the fact that there is an enormous amount of criticism in the House and the Senate of the fact that we have been paying too much for our ships; and that we have been building ships that are not entirely suitable; and that it is asserted that this business of the building of ships by the Government has to stop. A lot of people are saying that the authorizations will not be translated into appropriations, except for the expense of indemnifying the builders for reasonable claims. Well, that is a very unhappy situation, and I can say to you sincerely—and Mr. Hurley will bear me out—that since January I have tried to bring this message back—that no matter what the cost of building in England is, why can't we match it? We can match it in two ways. We must cut down our shipbuilding plants; we have got to. We have twice as many plants as we need, and we must cut them 50 per cent. Now, where will that cut fall? Unhappily it will fall. It may fall on a great many men that I am speaking to now, and I am sorry to think of their particular cases, but it will certainly fall on the inefficient; it will also fall largely, and fortunately, on the Government enterprises of shipbuilding. Hog Island will naturally have to come down at least to a very much smaller establishment, and probably will be made available for private enterprise as against Government operation. It will fall on the Lakes, because after all the builders on the Great Lakes, because of the limitations imposed by the canal, as all of these gentlemen have very fairly recognized, must go back to the business that they had before the war. That is, they must very largely go back to that. Modern operation requires an entirely different type of ship from what we have had in the past, and a large measure of that difference is in the size. We now have plans for a 15,000-ton ship that can be manned for practically the same cost as our 8,000-ton ship, and at an extra cost of a portion of a decimal. When we enter into this important problem of building up our foreign trade, the bulk of which will rest on space articles like coal, in which commodity we are going out to get a share of the world's trade in competition with Great Britain, we must have a ship that will deliver, as they do on the Lakes, a ton of coal a thousand miles as cheap or cheaper than any other nation in the world can do it.

In the reconstruction program—Mr. Hurley has reminded me of it—in the revision of our program great attention has to be given to the larger ship. Unfortunately we can not turn to the Lakes for a great number of ships. When we go out in the world to compete for world trade, those Lake ships, serviceable as they have been and as they are to-day, will be a handicap.

Out on the Pacific coast they build a type of ship generally known as the West type, a very good ship, but we have too many of them. We have too few ships of more than 10,000 tons. If you gentlemen ever look at the register published by the Division of Operations you will see what a small column represents ships over 10,000 tons. Whatever it was that started people in Great Britain to building large, fast ships, led in the proper direction and they were very wise in doing it. As an operating man I can tell you with all sincerity that the difference between a moderate-size slow ship and a large-size fast ship is the difference between black and red ink, the difference between success and failure.

Now, you can go up to Congress—I should like to, so far as I can—and assure the members of the Senate or House committees that the American shipbuilder is conscious of his responsibility; that he is going to tide this thing over; and that such aid as the Government has to give in the way of continuance of this program will be employed to build these 12,500 and 15,000 ton ships, of which I have estimated we should have at least 100, and I believe they will see their way to make the necessary money available. It would not be wisdom for Congress to go on appropriating money for an inefficient program. If you get down to a 10 or 20 year building program, and with it to the old efficiency that you had before the war, the industry will improve its position. But you must get away from the wretched "cost-plus" system, with a lot of drones in the yards, and riveting costing 20 cents—not 8 cents or 4 pence halfpenny, or 2 and 6 or 2 pence halfpenny or whatever it was, but to 20-cent riveting—and that was the general run of riveting—and until we get away from the "soldiering" of men and until we eliminate from the yards all of these auditors, comptrollers, and checkers who everybody knows are a handicap to the business and a great cost to the Shipping Board, we will never get down to sound prices.

Therefore it is your responsibility to come forward and recognize what Mr. Hurley is trying to do here; come forward and look at some of the specifications we have. If you do not like them, tell us how to change them, tell us what you want to do, and then come forward and say: "We will give you a lump-sum price of so much a ton for that program." Then we can draw up a contract and get a price that is justified.

Now, finally, before I go, a number of you men have protested here to-day against the changes that have been ordered. You have made me bleed, and if what you say is true, it is a shame. But the correction is in your own hands. Why don't you come forward and say these things? Please do it. I am here all the time, and at any time that you have a question that you would like to raise, you will find me glad to go into the matter with you, not only from the standpoint of utility, but of what it means in your work, what it will cost, and how much it will interfere with you, and if the balance is wrong I will cancel the change. So far as I am concerned, it will never go any further. Therefore don't hesitate, please, but come and see me. Is there anything else you want, Mr. Hurley?

Mr. HURLEY. No.

Mr. WILKINSON. Will you give us those figures again on prewar costs and present costs, so that we may take them down? I mean labor, material, and overhead.

Mr. ROSSETER. Labor, \$26; material, \$24; overhead, \$12. That is a total of \$62.

Mr. WILKINSON. Then, since you gave us the second, will you give that?

Mr. ROSSETER. The second, material, \$65; labor, \$70; overhead, \$32. Total, \$167. Now please understand these are not my figures. I expect you gentlemen to produce figures much lower than that.

Mr. WILKINSON. You said that you had an English cost there of so much per ton. What was that?

Mr. ROSSETER. Forth-eight pounds.

Mr. DONALD. That is for tank steamers.

Mr. HURLEY. We will adjourn in a few minutes. I would like briefly to say that this meeting has been very helpful to the members of the board, and I hope it has been helpful to you gentlemen, in helping us to arrive at a better understanding.

Now first, Mr. Ackerson, have the gentlemen handling claims in Philadelphia given instructions to be fair and just—and they want to be—in the settlement of every claim. We are not trying to split hairs on this proposition; we are trying to be just.

In addition to that we have submitted or will submit a plan to Congress on the ownership and operation of our fleet. That is step number one.

We had to decide on an objective, how many ships to build. So we decided that 50 per cent of our commerce should be moved in American bottoms. Then we started out to find out what sort of ships we should have to move that amount of commerce. If we move 100 per cent of our commerce, our ships will be coming back in ballast. You know the English never moved over 60 per cent. In taking that step we find that we have a great many ships of the Schuyler type still, and a type that is not really efficient.

Mr. Rosseter is making a report on the style and type of ships that we should have in the operating of a fleet, an efficient fleet. We are not going to take any step until we talk with you men again, but we are all very anxious to have you study this thing, certainly from the shipbuilder's point of view, from the ship operating point of view and from the country's point of view; and I want to say that I believe that I speak for the other members of the board when I say that we are going to talk to you men very soon again, and we want you to be ready to say: "Well, we can join with you in your recommendations to Congress heartily, sincerely; we believe you are right, and we would like to have you recommend the building of a million or two million tons of additional shipping, of a type and style different from those you are now building."

Now that is what we are trying to do, but we have to act quickly, and we don't expect you gentlemen to commit yourselves in any way.

This has been a sort of a "get together" meeting; getting acquainted. We have profited by it, but we want you to know our point of view. We are as directly concerned as you are in the employment of labor, the building of ships, and the operating of ships, but we must look at it as a whole, and we must take Congress into our confidence. We must be able to say to Congress: "You are justified in building these ships at these prices." And we are not trying to get you down to \$100 a ton. If you gentlemen don't make some readjustments and revisions, and we don't work out some plan

whereby the Government is not going to take all this money away from you and ruin the shipbuilding industry, it is going to be hard to accomplish anything. I am going to start to-morrow morning with the Treasury Department and see what can be done, and in doing that I will advise you what results are obtained.

Mr. STEVENS, have you anything that you want to say?

Mr. STEVENS. No.

Mr. HURLEY. Now I will be glad to get your reaction on these points. I would like to have a committee appointed on this income tax, or to have you make any other suggestions that you want to, but we want you with us, and we want to be with you. We want to build ships in American shipyards.

Mr. BRITAIN. What have you found from your study of the situation in England as to the relative costs in American and English yards?

Mr. HURLEY. We couldn't buy any ships in the English yards at fifty-fifty. They know as much about it as we do. But we are all getting light. There is no danger about that, either in operation or construction.

Mr. BRITAIN. There were some figures that Mr. Haig had there, for instance, about 5 cents. On our tanker construction—I just looked at the record yesterday—our piecework averages 5 cents, or around 5 cents, while in the straight work it averages from 11 to 13 cents for driving rivets on tanker construction. It would be interesting to know how that compares with the English yard in cost.

Mr. ROSSETER. That is a good idea.

Mr. BRITAIN. That is on tanker construction.

Mr. ROSSETER. That is very good.

Mr. WILKINSON. There is just one word I would like to say and then I am through. Remember that 80 per cent of every vessel to-day in the world is under 5,000 tons, and remember you can't build a vessel for a certain place where the water is shallow and where it will take 25 years to deepen it, any larger than the water is. You can't build it larger than the terminals will take, than the docks will take, than the business will take. Of course, I am an optimist, but you can't turn this shipping business all over into 20,000-ton vessels to-morrow any more than we could take the 4,000-ton boat on the lakes which we started with and put the 12,000 and 15,000 boats to all the docks and handle it successfully. The vessels ran for 12 years before they broke even when they made the boats too large.

I just wanted to put that into your mind so that you may keep your feet on the ground relative to making them all 35,000 tons.

Mr. BRITAIN. The largest ports in the world, I think, take 5,000 tons or less.

Mr. ROSSETER. I appreciate you jump in your figures very fast. You jump at from 15,000 to 20,000 and then to 35,000. My own opinion is that we should not build over 15,000 tons; that that is the maximum of size.

Now, about the draft of the ships, I will tell you this ship that I built in England for \$61 a ton steams  $12\frac{1}{2}$  knots, has a steaming radius of 18,000 miles, and arrives at any port in the world drawing only 20 feet of water.

Mr. WILKINSON. You have got to have something more than feed. This vessel that I speak of that was too large went to all the ports in the Great Lakes, but they couldn't make a dollar out of her for 12 years.

Mr. ROSSETER. Probably one of the troubles of ocean navigation is that you must not get your large ships too long-legged. You can have them as long as you please, or as broad as you please, unless you are going to Australia where they have narrow bridges and you can't get through; but, generally speaking, the limitation is the leg of the ship.

Mr. WILKINSON. I have seen a little in the papers about it, and that was why I thought I would drop a word.

Mr. MULL. We have built 14 ships of the same type, and that means that they must have given satisfaction, and I will say this, I represent a shipyard that has been in business for 70 years; 40 years of that 70 I have been with them. And in regard to the big ship, the big tonnage, I think we built the only trans-Atlantic ships that crossed the Atlantic up to the war time, and there were only four—the *St. Louis*, the *St. Paul*, the *Kroonland*, and the *Finland*, and I know the serious need of ships of that type, more like the *Kroonland* and *Finland*, I would say, rather than the *St. Louis* and *St. Paul*. They made big speed and held the world's record for several years.

I want to say further about the prices you gave, Mr. Rosseter, while it is perfectly immaterial to me, I wish you would say I didn't give them to you. [Laughter.]

Mr. ROSSETER. I am speaking of the prices on English-built ships and the relative percentage between operation, labor, etc.

Mr. MULL. The other prices I admit.

Mr. HURLEY. Now, gentlemen, don't hesitate to come in and see us at any time if there is anything on your mind. We want to work with you and expect you to work with us.

(Whereupon, at 5.55 o'clock p. m., the hearing adjourned.)





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