

retary of War first took up the question of letting aircraft contracts. One of the first things to vex his official soul after assuming office was a bitter feud out of which charges of insubordination arose between the Chief Signal Officer, then in command of aviation matters, and a subordinate officer of greater talent and zeal than patience in promoting the aviation section.¹ These sources of friction were eliminated by reorganization. Under the newly awakened interest in the possible needs of the army, which had almost neglected this arm of service hitherto, the Secretary got into communication with the three or four leading manufacturers of aircraft in this country, only to find that, with their commitments to European powers on lucrative contract work, early deliveries to the United States could not be expected. The official attitude is thus illustrated by two incidents. In the aircraft section of the Signal Corps the Secretary found, as he told the Select Committee on War Expenditures, "a very serious condition of disorganization."¹ Army officers, in some known cases at least, had allowed petty jealousies and temperamental attitudes toward one another to overshadow the devotion to duties they owed to the nation. The net result was that the progress of this important branch of service was to some extent sacrificed to personal animosities. The other incident, illustrating the low estimate in which aircraft was then held even by those in high command, is shown in the rejection by General Funston of the offer by the Secretary of War of airplanes for the memorable pursuit of the Mexican raider, Villa, in the American Army's incursion into that country with General Pershing's cavalry column in April, 1916. Prior to August 29, 1916, there had apparently been no special appropriation made for developing aircraft.

WAR AUTHORITIES ISOLATED FROM AIRCRAFT INDUSTRY

Not only was there lack of development within the military organization. That short sighted attitude of the military

¹ Testimony of the Secretary of War, Hearings on War Expenditures, Ser. II, Vol. I, pp. 3-7.

CHAPTER XXII

Profiteering versus Patriotism in Hog Island Project

The Hog Island project, in its contractual aspects, started out with a heavy load of prejudice against it. It gave to the public, whether rightly or wrongly, the impression that it was conceived in the purpose of the profiteer and developed in a riot of wastefulness. The Denman-Goethals dispute, a perfectly natural issue between a lawyer and an engineer accustomed to have complete control, helped to concentrate interest and inquiry almost exclusively upon this one of the twelve fabricating plants. There is something heroic in the fortitude of the responsible contractors in facing all the resulting criticism, investigation and popular reproach, biding the time until they could make good. To a large extent, however, the interests representing the contractor's side of the bargain were responsible for all that befell them. However public spirited they may have been as individuals, their official attitude spelled profiteering purpose to the public, which had long since made up its mind that the thing that the government paid for to this contracting interest was not worth the price.

PUBLIC DISTRUST OF BIG BUSINESS METHODS

In the first place, the negotiations with the government were not open and frank. Mr. Connick, of the agent corporation, in his persistent failure to submit to the Shipping Board the essential basis of the contract—the estimated cost of the ships for which he had been negotiating with General Goethals—utterly forfeited the confidence of the Shipping Board of which the Emergency Fleet Corporation was the subsidiary.¹ This vital datum of cost was retained in the hands of the contractors to be, without a copy either in the possession of the Fleet Corporation's office or of the Shipping Board, at the

¹ Hearings on Senate Resolution 170, Vol. I, p. 1113.

time when the Hog Island contract first came before the board for approval. Indeed no amount of request by wire or by telephone succeeded in getting out of the hands of the one party to the contract the accepted schedule of costs on which the fees were to be calculated. Under these circumstances it is not at all surprising that the contractors, with whom General Goethals had negotiated tentatively the Hog Island contract, failed to command the confidence of the Shipping Board. As a result, the shipbuilding program lost practically two months of the most valuable time, in the midst of the gloomiest outlook during our participation in the war, in the inauguration of its fabricated projects at the three main yards. By the resignations of the head of the Fleet Corporation and the president of the Shipping Board, these contracts were thrown forward into September for final signature. By that time, however, the Shipping Board and the head of the Fleet Corporation, Admiral Capps, had taken time to examine the terms, and a much fairer contract had resulted, especially as to terms of compensation.¹

The view that big business had overreached itself, not for the first time in war contracting, was probably best voiced in the attitude of the Shipping Board's former president, whose duty it was to sign contracts representing the United States. In his testimony before the Senate Committee on Commerce, April 5, 1918, his position is thus defined and emphasized:

The question of profiteering at Hog Island was the only one between General Goethals and myself when we handed in our resignations. I felt that, in a great transaction like this work, where the government itself, and its power, was the main reliance for the success of the enterprise, anything that looked like a profiteering payment to the great people on top who could well have given us for nothing the services of these five or six men, would be simply an invitation to every laboring man, from the lowest unskilled laborer up, to demand a wage on a similar basis; and that instead of getting us more ships and faster ships, this kind of overloading of profit at the top would impede the progress of the work, by starting strikes and labor disputes up and down the scale of labor organization. . . .

It is greatly to the credit of the gentlemen who have succeeded us that a very much lower and fairer figure was fixed on for the acquisition of this skill that these men had to give.²

¹ Hearings on Senate Resolution 170, Vol. II, p. 2021.

² *Ibid.*, p. 2432.

NAVY'S FAIR PRICE POLICY A BARGAINING FACTOR

The real credit for this reduction in contract fees, from one of 10 per cent of costs to one of 5 per cent or less, was partly due to the current criticism as reflected in Congress. There was much current discussion adverse to cost-plus contracts, especially of the percentage type. But it was also due to the infusion of the navy's fair price policy into ship awards, by the advent of Admiral Capps as General Goethals' successor in the Fleet Corporation. In the negotiations which were later resumed, the president of the American International Shipbuilding Corporation, the agent, and the operative company at Hog Island, says:

We had this contract pretty well worked out when the difficulties arose in the Shipping Board, and things were laid aside until we got into it again with Admiral Capps. . . . We told him about where we had reached. He gave us his ideas about the contract; what he thought the duties of people in our position were to the government, with which we agreed. We told him that we would like to have his ideas of what he thought compensation ought to be here. He gave them to us and we accepted them, provided we could work out the proper form of contract, which we did, and I consider that it was very well worked out from the standpoint of the government's interest.¹

The Hog Island contract was finally signed September 13, 1917. Nothing was done prior to that date, except plan out the designs and specifications provisionally for the yards, on which later the contractors did \$65,000,000 worth of work without getting any fee whatever. They sublet the fifty ways to five different subcontractors, in groups of ten each. The operating concern, the American International Shipbuilding Corporation, had the business of subcontracting largely in its own hands, even though the Fleet Corporation maintained an official there whose more or less formal approval was necessary to make the subcontracts effective. Not a single contract of this kind submitted to the Fleet Corporation's official for approval was ever rejected, although a number of them were returned with objections stated and explanations asked. The practice was for the shipbuilding contractor

¹ Hearings on Senate Resolution 170, Vol. II, p. 2021. Testimony of Dwight P. Robinson.

to ask for bids from subcontractors, at least three in each case, thus preserving competitive conditions in selection of subcontractors.¹ These subcontracting firms were paid a fee of 5 per cent on the costs estimated. The task was one of enormous proportions and responsibility. Practically all of these contracts had to be made by the agent contractor under the Fleet Corporation's nominal supervision but without any close checking of prices and terms.

¹ Hearings on Senate Resolution 170, Vol. II, pp. 1572-1573.

CHAPTER XXIII

Policy and Practice in Wooden Shipbuilding Contracts

From the viewpoint of the Shipping Board, wooden shipbuilding was from the very beginning of the program regarded as a desirable supplementary source of tonnage. On that matter there was little if any doubt after the United States got into the conflict. Within about three weeks after it was organized the board, finding that the steel shipbuilding yards were in no condition to construct for government account anything but an inconsiderable tonnage for some months to come, on existing facilities at their disposal, came to this conclusion regarding wood tonnage:

Apparently the only available resource of the country for the further construction of tonnage was wood, and as many wooden ships driven by steam power and constructed from unseasoned timber were in successful use on the Pacific coast, it concluded to engage in an enterprise of stimulating the construction of wooden cargo carriers as a supplement to the output of the steel yards.¹

The investigations on which this decision was based were made by F. A. Eustis and F. Huntington Clark, who went thoroughly into the questions of the availability of equipment and engines and its bearing on the problem of similar supplies for steel shipping. The board's proposals were then formulated, the wooden shipbuilders of all coasts canvassed, and the conclusions submitted to the President. They were in turn referred to the Council of National Defense, from both of which in due time official approval was received.

Some of the earliest contracts let were for wooden ships, mainly of the Ferris type of construction. In fact, the board inaugurated wooden construction at first more largely than steel tonnage, for the reason already indicated. Within the first 22 contracts awarded 36 ships were of wood, 32 of both wood and steel (composite) and 28 of steel, making 96 in all,

¹Letter of Shipping Board to Senate Committee on Commerce, May 5, 1917.

within the first two months of contracting. By the beginning of 1918 over 400 wooden ships had been awarded, with 60 more pending. The standard was that of 3,500 to 4,000 tons, Ferris type, although as many as ten different types figured in the board's awards on any considerable scale. These were mainly lump sum contracts. The contract prices for the Ferris type wooden steamers ranged, during most of this period, from \$140 to \$160 per deadweight ton.¹ In point of geographical distribution of contracts this branch of the industry was the most widely extended branch of the shipbuilding program. It included a large number of ports on every coast, including the Lakes. Up to December 1, 1918, contracts had been let for 1,034 ships of 3,024,000 tons involving commitments of \$503,129,582, including 34 concrete ships.

ELEMENTS OF REACTION AND DELAY ON CONTRACTS

From this apparently normal policy toward wooden shipbuilding, as a part of the means of meeting the maritime emergency, there resulted some reaction about the time of the Goethals-Denman resignations. These two officials had apparently been in entire accord on the advisability of pushing wooden construction wherever it could be done without prejudice to the major interest of reliance on steel tonnage. Although the wooden ship plan was generally attributed to President Denman, who knew the capabilities of the Pacific coast on this matter, General Goethals had actually brought to the point of executed contracts or ready for signing as much as 1,218,000 tons of such ships prior to the date of his resignation.² Possibly the report of those who made the survey as to the engine supply for the wooden ships, that they could furnish within the next eighteen months enough engines for a wooden ship production of between 2,500,000 and 3,000,000 tons, awoke jealousies.³

¹ Hearings on Senate Resolution 170, Vol. I, p. 1837.

² *Ibid.*, p. 1100.

³ *Ibid.*, p. 1098.

Between the end of July and the beginning of January following, adverse attitudes on the part of the Fleet Corporation toward wooden shipbuilding became rumored. Airplane spruce production on the west coast asserted a prior claim on the industry. The effect was a suspension of activities already under way and of a most promising character for tonnage production. The report that the Anacortes yard on the Puget Sound might be closed down, with several ships well advanced toward completion, had a damaging effect all along the west coast. The reason for the temporary suspension of letting these contracts, in January, 1918, was alleged to be the difficulty in getting out the timber needed for beginning construction. That applied to the yards unequally. Some of the eastern yards had taken contracts without being sure of their supply; some southern yards found the lumber contractors of that section unable to get out timbers as fast as was anticipated; and others whose experience was nil should never have been awarded any ship contracts of any kind. The time to take account of the situation had arrived, and contracting was thus and then suspended after pending negotiations were cleared. But this was only temporary.

POLICY OF CONSERVATIVE CONTROL PREVAILS

The lack of progress in cases where contracts were actually awarded may have led to a suggestion of cancelation; but these were only incidental to the fundamental difficulty of reenlisting wooden shipbuilders, lumbermen and others in the Emergency Fleet Corporation's program if it once allowed the suspension of work where builders and accessory industries had made commitments on its promises. The Fleet Corporation, having heard from the commercial interests of the country on this subject, thought enough of the exigency to issue a statement of policy regarding wooden shipbuilding. It feared that the concentration of the country's demands on the Pacific coast for lumber might interfere with the other war contract industries depending on lumber, if more wooden ship contracts were awarded. Hence an embargo on ship-

ments from that area of production. But it was held that this restrictive policy was based on misinformation—information that was brought to the Shipping Board by agents sent by the board to ascertain the Pacific coast situation without knowing beforehand anything about the resources and methods of that territory. This sort of policy could but be demoralizing, if not actually causing doubt as to the sincerity of purpose of the board toward wooden ship construction. This suspicion was, however, largely dissipated, though much too late in being issued, by the following announcement by the board on January 21, 1918:¹

The policy of the Shipping Board and the Emergency Fleet Corporation is to build the ships that can be built and to build them as fast as human labor can turn them out. This applies to the wooden ships as well as to the steel ships. Our policy is to give as much support as possible to those who already have contracts rather than withdraw that support in order to extend the number of yards and ships that might exist on paper. New contracts are balanced against the available labor supply and the available supply of materials. . . . The contracts already issued for wooden ships call for more lumber than the amount that is being supplied at the present time. As soon as there is assurance of getting more lumber it will be safe to issue more contracts for wooden ships.

¹ Hearings on Senate Resolution 170, Vol. I, p. 1000.

CHAPTER XXIV

Aircraft Production Contracts

No other sphere of governmental war contracting, not even excepting shipbuilding, was anywhere so disappointing in results within the war period as that of aircraft production. The national weakness of boasting about bigness was here at its best, especially among some of the official misleaders of popular expectation. When the midsummer program of 1917, promising 25,000 planes, turned into the apparently fruitless situation of the autumn of 1918, the country was simply heartsick with dismay. It was a real relief to get Justice Charles E. Hughes's report to the Attorney General, made public October 25, 1918.¹ Something less than a month later, on November 20, 1918, following the armistice of November 11, General Pershing made his report on the organization and operation of the American Expeditionary Forces, from May 26, 1917, to the signing of the armistice. In that he said of the army's equipment for modern war, that among our most important deficiencies in material were artillery, aviation and tanks. And of aircraft he specifically stated:

In aviation we were in the same situation, and here again the French Government came to our aid until our own aviation program should be under way. We obtained from the French the necessary planes for training our personnel, and they have provided us with a total of 2,676 pursuit, observation and bombing planes. The first airplanes received from home arrived in May, and altogether we had received 1,379. The first American squadron completely equipped by American production, including airplanes, crossed the German lines on August 7, 1918.²

It should be said in advance that the military authorities never succeeded in developing the prewar air service to anything like an adequate position. In March, 1916, the Sec-

¹ Report of Charles E. Hughes on Aircraft Production Investigation, October 25, 1918, Congressional Record, December 30, 1918, Appendix A, pp. 883-914.

² Report of General Pershing to the Secretary of War, November 20, 1918, Congressional Record, December 30, 1918, Appendix B, p. 915.

establishment, of keeping itself out of touch with the branches of the country's industrial organization on which it must rely most directly in case of an emergency, now demonstrated its folly. This part of the contractual situation has been aptly described in a somewhat critical summary of conditions after the country had been at war a full year and had become awakened to a comprehensive aircraft program. Speaking of governmental neglect to take interest in aircraft development, this survey says:

When we entered this war a year or more ago our War Department had a few airplanes which proved themselves worthless when tested in Mexico. We had a number of aircraft inventors and experts. We had men of capital who believed in the future of the airplane both for purposes of war and of peace. The Dayton-Wright Company was making planes and other accessories, but was not manufacturing motors. The Curtiss interests were making planes and engines. The Wright-Martin Aircraft Corporation was making the Hispano-Suiza motors for the French Government. Other concerns were making parts of the Rolls-Royce for the British Government. There were a score or more of companies hard at work on various types of engines and completed planes.

We had laid a firm foundation of the aircraft industry. This industry thought it had the right to expect the support and patronage of our government. No such support was extended when Germany invaded Belgium and plunged Europe into war in 1914, but our inventors and manufacturers of aircraft devices renewed their efforts so as to be better prepared in the event we were dragged into the conflict.

The War Department prejudiced the contractual situation, in both policy and in practice, by drawing into its council men who knew little or nothing of this specialized craft. Its practice was that of relying on men who had not hitherto wrestled with the problems of the industry. Would any other nation's military authorities in such a crisis have failed to call to its service, for instance, the leaders in this pioneering work who gave to the world the epoch making secret of power over the air?

This policy had its logical effect in widening the gap between the skilled and expert specialists on the one hand and the war authorities on the other. It put into the contracting work men who had hardly the standing of amateurs in the industry. There was not a single member of the advisory or official boards on aircraft production which guided the government

who could speak for and to his fellow aircraftmen for the purpose of bringing the resources of the craft into harmony of action on the government's behalf.¹ On the contrary—

Not a man closely familiar with the science or practice of aviation or of aircraft production was appointed to either of these boards, and up to the present date (May 17, 1918) not a man recognized as an aviation expert has been called by the War Department to duty in either of these official bodies or given any authority in directing its policy and in expediting the speedy production of aircraft fit to meet the up-to-date and highly efficient German air fleet.²

Another case of shutting its eyes to the facts of airplane producing facilities is given in the experience of the Wittmann-Lewis Aircraft Company. Although not a large concern, no one could truthfully deny that its staff was well versed in the science and art of designing and constructing airplanes. It had been in the business for twelve years, in which time it had made approximately 300 airplanes for many of the best known aviators. These had been flown all over the United States and in foreign countries. They had a capacity to deliver 600 machines inside of twelve months, and 100 machines monthly thereafter. They were thus among the oldest aircraft manufacturers in the country, but were never allowed, though once promised, to have an opportunity to participate in supplying these much needed craft.³ During two years of continuous and steadfast demonstration of their ability to serve the aircraft authorities, they met a parallel proof of the government's policy of promise with nonperformance. That insisently confused conglomeration of incompetence and irresponsibility embodied in the Coffin-Deeds-Potter aggregation at Washington, in order to save the automobile industry and the piano manufacturers for airplane making, baffled the efforts of dozens of competent engineers and manufacturers of aircraft to assist the government.⁴ To

¹ Investigation of the War Department, Part 3, p. 1603.

² See Thomas Committee Report, Senate Report, No. 555, 65th Cong., 2d Sess., p. 3.

³ Hearings before Subcommittee of Senate Committee on Military Affairs, 65th Cong., 2d Sess., Vol. II, p. 920.

⁴ Read reported statement of Victor E. Clarke, of Aircraft Production Board, plant facilities division, *Ibid.*, p. 895 (second paragraph); also p. 921 (paragraphs 2 and 3) in letter of July 30, 1918, to Senator A. S. Thomas; and p. 896.