

CONTENTS.

Carnegie Endowment.

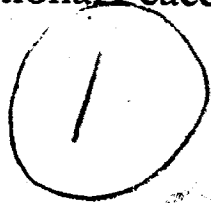
Preliminary Economic Studies of the War.

1. (No.17.) Early Effects of the War upon the Finance, Commerce & Industry of Peru. By L. S. Rowe. 1920. pp.60.
X.79162.N2 FO 1-32.
2. (No.18.) Government Control & Operation of Industry in Great Britain & the U.S. during the World War. By C. W. Baker. 1921. pp.138-33-105.
XA,9:75.3.N2 FI
3. (No.25.) Government War Contracts. By J. F. Crowell. 1920. pp.357. 106-291.
XA.573.73.N2 FO

Carnegie Endowment for International Peace

DIVISION OF ECONOMICS AND HISTORY

JOHN BATES CLARK, DIRECTOR.



PRELIMINARY ECONOMIC STUDIES OF THE WAR

EDITED BY

DAVID KINLEY

**Professor of Political Economy, University of Illinois
Member of Committee of Research of the Endowment**

No. 17

**EARLY EFFECTS OF THE WAR UPON
THE FINANCE, COMMERCE AND
INDUSTRY OF PERU**

BY

L. S. ROWE, PH.D., LL.D.

**Professor of Political Science
University of Pennsylvania**

NEW YORK

OXFORD UNIVERSITY PRESS

AMERICAN BRANCH: 35 WEST 32ND STREET

LONDON, TORONTO, MELBOURNE, AND BOMBAY

1920

COPYRIGHT 1920
BY THE
CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE
2 JACKSON PLACE, WASHINGTON, D. C.

EDITOR'S PREFACE

The purpose of this study is to present in succinct form the effect of the outbreak of the World War on the commerce, industry and finances of Peru. The material was collected by Dr. Rowe in the course of a visit to the country in 1915, and the manuscript was submitted soon after his return. The publication has been unavoidably delayed, but inasmuch as it presents a matter of enduring interest this delay is not of serious moment.

The facts presented show the far-reaching effect of the war in Europe on the life of a people far removed from the theater of the conflict and which at the time maintained a strictly neutral position, although subsequently diplomatic relations with the Central Powers were severed. Conditions in Peru, as set forth in this monograph, illustrate the close interdependence of national interests and the deep and vital concern of every nation in the maintenance of world peace.

DAVID KINLEY, *Editor.*

CONTENTS

CHAPTER		PAGE
I	Conditions Preceding the War	3
II	Government Finances Preceding the War	8
III	Financial System and Effect of the War Thereon ..	12
IV	Commercial and Industrial Situation Created by the War	24
V	Effect of the War on Wages and Labor Conditions	38
VI	Effect of the War on International Trade	43
	Appendices	51

INDEX

- Adjutant General, expenditures of, 9, 35.
 Adjustment. *See* Liquidation.
 Advisory Commission (Council of National Defense): creation of, 6, 28; nature and division of, 52-54, 58.
 Aero Club of America, 250.
 Agency compensation system, criticism of, 211.
 Agency contracts: nature and use of, 33, 36; employment of, by Emergency Fleet Corporation, 184; principle of payment in, 186, 188, 190, 195; fiduciary position of agency contractors, 337.
 Aircraft production: vil, 28; commandeering of airplane spruce, 49-50; comparison of, in army and navy, 135; disappointing results of, 231; isolation of war authorities from aircraft industry, 232; extent of production to date of armistice, 235; failure of Deeds-Coffin program, 236; cost-plus contracts for Liberty engines, 237; analysis of Liberty engine builders' profits, 239; unfair profits of plane contractors on bogey cost basis, 244; a fair basic price by arbitration, 245; treatment of aircraft industry contractors, 246; causes of aircraft failure, 250-252; appropriations and commitments for aviation, 252; conditions surrounding airplane spruce-fir contracts, 253; first and second stages in airplane spruce production, 256-257; contracting results in army and navy, 348.
 Aircraft Production Board, 50, 235, 249-250, 254, 256-257.
 Allocation contracts: nature and use of, 32, 44, 45; allocation of contracts by Committee on Supplies, 55; application of allocating principle in war contracting, 56, 101, 150; transition to allocation of contracts in navy, 156; comparative extent of allocation and competition in navy, 157-158.
 American Federation of Labor, 89.
 American International Shipbuilding Corporation: agency contracts with, 37, 183-184; control of labor market, 133; investment in, by government, 182; contractors' fees, 186-187, 212, 214-216, 218; tonnage delivered, 196; tonnage contracted for, 209-210, 216; subcontracting, 220-221, 223; cost accounting, 222-224; housing, 267-268; answer to charge of mismanagement, 336-337.
 Ammunition: expenditures for, 96; production of, 112, 121.
 Anacortes shipyard, 229.
 Army Commodity Committees, 21, 25, 71.
 Attorney General, The, 22, 222, 231, 334.
 Australian War Precaution Act, 49.
 Automatic rifles, expenditures for, 96.
 Aviation. *See* Aircraft production.
 Baldwin Locomotive Works, 46.
 Balfour, Arthur James, 205.
 Balfour Mission, 175.
 Bethlehem Shipbuilding Corporation, 264.
 Board of Contract Adjustment, 309, 314-315, 350.
 Board of Contract Review, 71, 309-310.
 Borah Report, 341.
 Bowie, Admiral F. T., 188, 217, 219.
 Brill Company, J. G., 46.
 Bristol airplanes, 247-248.
 Bristol shipyard. *See* Merchant Shipbuilding Corporation.
 Bureau claims boards, 314-315.
 Bureau of Industrial Housing and Transportation (Department of Labor), 270, 283-285.
 Bureau system of contracting: failure of, 27; in Engineer Corps, 334.
 Camps and cantonments: costs, 75, 86; awarded under cost-plus contracts, 75, 86, 93; government supervision over construction, 76; reasons for adoption of cost plus percentage fee contract, 81-82; points of mutual appeal in emergency contractor's fee, 84; schedule of cost-plus fees, 85; selection of contractors, 86-88, 90-91; official estimate of contractual results, 92; theory of the graduated percentage fee contract, 95.
 Cancellation. *See* Liquidation.
 Capital Issues Committee, 338.
 Capps, Admiral W. L., 185, 224-225.
 Caproni airplanes, 246, 248.
 Chartering Committee (U. S. Shipping Board), 202.
 Chemical Warfare Service, expenditures of, 9.
 Chester Shipbuilding Company, 218.
 Claims Staff Branch, 316, 324.
 Clark, F. Huntington, 227.
 Classification of contracts, 32-33.
 Coffin, Howard E., 50, 236, 248.
 Commandeering (requisitioning), 7, 33; disadvantages of, 40; stigma attached to, 42; problem of fair and just compensation, 42; legality of commandeering authority, 43; form of navy's mandatory contract or order, 44; bargaining value of authority to commander, 45-47; conditions which apparently justify, 48; of west coast spruce production, 49; of the wool supply, 79, 150; amount spent for commandeered shipping tonnage, 169; powers of U. S. Shipping Board, 181, 184; ships requisitioned, 198; contractual arrangements for requisitioned ships, 200; control of chartering nonrequisitioned ships, 201; requisitioning of incomplete ships, 203; as an emergency shipyard policy, 206.
 Commerce, Department of, 36.
 Commissioner of Internal Revenue, 341.
 Committee on Supplies (Council of National Defense), negotiation of contracts by, 28; purchasing of clothing and equipage taken over by, 30; contracting record of, 54; allocation of contracts by, 55; testimony of chairman of, on wool and cotton production, 57; weakness and overthrow of policy, 58, 65.
 Compensation Board (Navy Department), 149.
 Competitive awards (contracts): prewar use of, by army, 31; application of, 32-33, 40; wisdom of, proven, 345.
 Competitive bidding, 5; competitive procedure obligatory in ordinary times, 13; basic idea of, 21; interdepartmental, 29; application of, by Committee on Supplies in purchase of shoes and leather, 55; in camp construction, 79; disappearance of, in Ordnance Office, 101, 150, 154, 158; application of, by Housing Corporation, 271, 335.
 Comptroller of the Treasury, 19, 21, 31, 290, 310.
 Connick, Harris G. H., 213-216, 223.
 Construction Division. *See* Emergency Construction Division.
 Cost accounting, 30, 39, 117.
 Cost control, 116, 130, 136; navy's cardinal principle of, 144; 279, 281.

- Cost Engineering Section (U. S. Housing Corporation), 278, 281.
- Cost-Plus contracts, 21; legislation and features of, 32, 36; most extensive application of, 37; elements necessitating adoption of, 38; competitive, cost-plus and commandeering contracts, 40; extensive use of, by Ordnance Department, 45-46, 55, 107; rejection of, as a result of reorganization of supply system, 70-73; profits under, 75, 84; reasons for adoption in emergency construction work, 81-82; determination of fees, 84; schedule of cost-plus fees for emergency building contracts, 85; criticisms of, 88; adoption of, for emergency construction work, 93; theory of the graduated percentage fee contract, 95; four essential factors in, 118; in rifle production, 122, 125, 131; prewar use of, by navy, 137; a war time expedient, 140; in shipbuilding, 141, 148-150, 165, 183-184, 193-194; adoption by naval authorities, 144-145; cost and compensation provisions, 146-147; for Liberty engines, 237; aircraft production, 243, 256-258, 268, 276; settlement of, 305.
- Council of National Defense, vii; creation of, 6, 8, 27; assumption of virtual role of war contracting, 28, 29-31, 37-38, 42; duty and character of, 52; contracting methods of advisory committees of, 53-54, 58; position of, in principle and practice, 59-60; criticisms of, 61, 65, 69, 78, 86-87, 92, 102, 152, 227, 257, 263, 342.
- Court of Claims, 5, 35, 311.
- Crowell, Benedict, 131, 310.
- Crozier, General William, 35, 67, 99, 102, 128, 130.
- Curtiss Aeroplane and Motor Corporation, 246.
- Dayton-Wright Airplane Company, 223, 237, 244-246.
- Deeds, Colonel E. E., 239, 256.
- Definition of costs, 117.
- De Haviland airplanes, 245-246.
- Denman, William, 176, 205, 214, 223, 228.
- Dent Act (Law), validation of informal orders or contracts by, 31, 289-290, 311, 314, 342.
- Department of Commerce, 38.
- Department of Interior, appropriations for, 10-11, 19.
- Department of Justice, 296.
- Department of Labor, 10, 278.
- Department of State, 175.
- Destroyer building, cost-plus contracts in, 141.
- Disque, Colonel, 258, 266.
- District Ordnance Office, 110.
- District War Claims Boards, vii, 315; features of hearings of, 316, 320.
- Division of Purchase, Storage and Traffic (Quartermaster Corps), 10, 21; consolidation of war purchasing agencies under, 27, 32, 63; supply circulars issued by, 66-67, 70-71, 105, 289, 298; organization of sales division under, 300-301, 307, 310.
- Douglas fir, 254-255.
- Du Fay, Captain William, 350.
- "Eagles" (patrol boats), 153.
- Eddystone rifle plant, 130; record of, 132, 134, 310.
- Eidlitz, Otto M., 263-264, 269, 283.
- Eisenman, Charles, 55-57.
- Emergency building contracts, schedule of cost-plus fees for, 85.
- Emergency Construction Committee (Council of National Defense), 37, 87, 89, 92, 94, 273, 282.
- Emergency Construction Division (Quartermaster Corps), 76, 87, 81; three fundamental lines followed by, 87, 92, 94, 143, 273; percentage of profits allowed by, 277, 280.
- Emergency Deficiency Act, 264.
- Emergency Fleet Corporation, vii, 37, 78, 168-169, 171; scope of contracting of, 172-173; construction problems of, 174; character of contracting problem of, 175; tonnage contracted for, 176-177; construction activities and deliveries of, 178; authorizations, commitments and expenditures of, 178-179; major lines of contract of, 181; varying character of contractual arrangements of, 183; four types of awards by, 184-185, 187; lump sum contracts in 80 per cent of awards, 188, 190; date of first contract of, 191-193; policy of, toward contract shipyards, 195-197; ships requisitioned by, 198; number and tonnage of incomplete ships requisitioned by, 203-205, 208, 210, 213-217; expenditures of, for plant construction, 220-226; policy of, as regards wooden ships, 229-230, 254, 264; extent and results of shipyard housing under, 205; commitments of, for housing shipyard workers, 260-267, 336.
- Emergency Shipping Act, 172.
- Enfield rifle, 122-124, 126, 130.
- Engineer Corps: expenditures of, 9; prewar use of procurement orders by, 31, 33, 63, 115, 113; general method of procurement in, 63; consolidation of purchases of, 70; high contracting standard of, 72; increase in personnel of, 73, 81, 92, 152; recruiting efforts of, 258; defects of bureau contracting system least apparent in, 334.
- Engineering News-Record, 279.
- Eustis, F. A., 227.
- Federal Reserve Bank, vii.
- Federal Reserve Board, 339.
- Enfield rifle, 122-124, 126, 130.
- Federal Trade Commission, 38, 138, 155, 158, 243, 273.
- Fees: how determined under cost-plus contracts, 84; under commandeering contracts, 42; in shipbuilding plants, 218.
- Fee system. *See* Cost-plus contracts.
- Ferris type of wooden ships, 227, 228.
- Finance, Director of, 9, 288.
- Fisher Body Corporation, 237.
- Food and Fuel Administration, 49, 69, 158.
- Food and Fuel Control Act, 15.
- Food Purchasing Board, 158.
- Ford Motor Company, 153, 238.
- Forms of contract: evolution of, 31; factors affecting, 36.
- Fort Benjamin Harrison, 81.
- Fort Myer, 81.
- Foster, Major Clair, 338.
- Fuel and Food Control Act, 15.
- Fuller Company, G. A., 269.
- Funston, General Frederick, 232.
- General Motors Company, 238, 241.
- General Munitions Board, 25, 58, 87, 101, 128, 273.
- Goethals, General George W., 29-30, 32, 47, 68-70, 180, 184-185, 203, 213-215, 223-225, 228, 290-291, 310.
- Government contracting: general features of peace time contracting, 4; basic factors in war time contracting, 6; volume of, 8; dynamic import and scope of war contracts, 10; statutory principles of procedure, 13; theory of government war contracting, 18; administrative principles of procedure, 19; failure of isolated bureau system, 27; evolution of contract forms as used by army and navy, 31; classification of war time contracts, 32-33; factors affecting forms of contracts, 36; interdepartmental efforts to standardize contracts, 37; competitive, cost-plus and commandeering contracts, 40; schedule of cost-plus fees for emergency building con-

- tracts, 85; theory of the graduated percentage fee contract, 95; specifications and provisions in standard contracts, 162; problem of settling unfinished contracts, 288; termination of contracts and orders in public interest, 307; supplemental contracts for settling claims, 308; summary of features in contract adjustment, 309; war time status of government contract, 324; theory of the contractor's war time position, 335; fiduciary position of agency contractors, 337; war contracts had first call on capital, 338; federal taxes on war contract profits, 340; Congressional criticism and war contracts, 341; concrete economic results of war contract era, 343; defects of bureau system disclosed, 344.
- Grant-Smith-Porter-Guthrie Company, 185.
- Hog Island. *See* American International Shipbuilding Corporation.
- Housing Corporation. *See* United States Housing Corporation.
- Housing program: origin and development of, 263; extent and results of shipyard housing, 265, 267, 336; housing arrangements at Hog Island, 267; contractors' fees in projects of Housing Corporation, 268; method of selecting contractors, 270; subcontracting, 272; materials, prices and wages in housing contracts, 273-274; effect of armistice on housing policy, 284-285; housing operations on the whole justified, 340. *See also* United States Housing Corporation, operations of.
- Hughes, Ex-Justice Charles E., 231, 240.
- Hurley, Edward N., 185.
- Illinois Manufacturers' Association, 309.
- Industrial Relations Committee, 274.
- Inspection Division (Ordnance Office), 121.
- Interdepartmental Conference, 38, 40.
- Interior Department, appropriations for, 10-11, 19.
- International Ordnance Agreement, 97, 106.
- Jobbers, 23.
- Judge Advocate General, expenditures of, 9, 99.
- Justice, Department of, 296.
- Kernan, Colonel Francis J., 14.
- King, Senator W. H., 341.
- Labor, Department of, 10, 278.
- Lake Pleasant Railroad Contract, 261.
- Lake Torpedo Boat Company, 148, 159, 168.
- Landis, Colonel, 53.
- Leadbetter, Major, 257-258.
- Legislation: Australian War Precaution Act, 49, Overman Act, 7, 16, 18; Food and Fuel Control Act, 15; Dent Act, 31, 289-290, 311, 314, 342; Munitions Manufacturers' Tax Act, 189, 340; Emergency Deficiency Act, 264; Emergency Shipping Act, 169, 171-172; National Defense Act, 6; Poindexter bill, 32; Revenue Act, 341.
- Liberty Engines (motors), 70, 124; cost-plus contracts for, 237; awards and monthly deliveries of, 238; analysis of profits of builders of, 239; profits of contractors on a \$4,000 fixed-price basis, 241-242, 246, 248, 261, 348.
- Lincoln Motor Company, 238, 240-241.
- Liquidation: summary of features of, 309; termination of contracts and orders in public interest, 307; District War Claims Boards, vii, 315-316, 320; supplemental contracts for settling claims, 308; problems of settling, 288; Philadelphia District Claims Board, 318, 321.
- Liquidation Commission, 351.
- Littell, Colonel E. W., 78, 88.
- Lord, General H. M., 288.
- Lovett, Judge R. S., 50.
- Lumberman's Protective League, 258.
- Lump sum awards: hazards of, 5; under competitive contracts, 33; definition of, 36; to Baldwin Locomotive Works, 46; in shipbuilding, 148; of Emergency Fleet Corporation, 188, 228; payments under, 189, 193-194.
- March, General R. C., 76.
- McGowan, Admiral Samuel, 139, 153.
- Medical Department (Corps): expenditures of, 9; consolidation of purchases of, 70; high contracting standard of, 72; appropriations for, 73.
- Merchant shipbuilding. *See* Shipbuilding.
- Merchant Shipbuilding Corporation (Bristol), 183, 185, 214-215, 217-218.
- Midvale Steel and Ordnance Company, 132, 330.
- Military Aviation and Aeronautics, expenditures for, 9.
- Military Intelligence Branch, 72.
- Monroher, General Charles T., 252.
- Munitions Board (Council of National Defense), 58, 78, 273.
- Munitions Department, 10, 52.
- Munitions, Director of, 105, 112, 131, 290.
- Munitions Manufacturers' Tax (Act), 189, 340.
- National Defense Act, 6; formulation of government policy toward, 13; special application of, to contract conditions as related to purchase of supplies and production of munitions, 15-22; legalization of cost-plus contracts by, 32; provision for increase in personnel of Ordnance Office, 25, 34; commanding authority conferred by, 45-46, 53, 86, 334.
- Naval contracting: commanding contract, 44; building program, 77, 135; prewar use of cost-plus contracts, 137; pioneering risks in naval production, 139; cost-plus contract a war time expedient, 140; cost and compensation provisions in standard naval contract, 146; Compensation Board, 149; price policy in, 151; transition to allocation of contracts, 157; comparative extent of allocation and competition, 157; features of standard yards and docks contract, 159; specifications and provisions in standard contracts, 162; changes in plans and specifications and delays, 165.
- Navy Board of Appraisal and Condemnation, 43, 47.
- Navy Bureau of Construction and Repairs, 135, 141, 143, 159.
- Navy Bureau of Supplies and Accounts, 44, 67, 135, 138, 144, 150-151, 154, 345.
- Navy Bureau of Yards and Docks, 77, 159, 162, 164-166, 278.
- Navy Department: appropriations for, 10; chief contractual operations of, 135; cardinal principle of cost control in, 144. *See also* Naval contracting.
- Navy Ordnance Bureau, 350.
- Newark Shipyard. *See* Submarine Boat Corporation.
- New London submarine base, 159, 163, 166.
- Newport News Shipbuilding and Dry Dock Company, 141.
- New York Merchants' Association, 309.
- New York Shipbuilding Corporation, 203, 210.
- Nordyke and Marmon Company, 238, 241.
- Ocean Advisory Commission on Just Compensation, 201.
- Ordnance Claims Board, 314; schedule of functions of, 317, 320, 331.
- Ordnance contracts, analysis of principal features of, 107-108; cancellation of, 113; control of costs in, 116; four essential factors in cost-plus contracts, 116.

- Ordnance Department: expenditures of, 9; increase in personnel of, 34; methods of getting supplies, 45; relative importance of, 96; situation at outbreak of war, 98; contract procedure in, 100; strategic importance of America's ordnance problem, 102; reorganization of, as affecting contracts, 104; methods of controlling materials and deliveries, 109; payments, priorities and inspection, 110; inspection standards and emergency production, 111.
- Ordnance Manufacturing Policy, Kernan report on, 14, 46.
- Otis Elevator Company, 306.
- Overman Act, 7, 16, 18.
- Packard Motor Car Company, 238, 239.
- Panama Canal, 73, 77, 180.
- Peace time contracting, general features of, 4.
- Pershing, General John J., 231-232, 293.
- Philadelphia District Claims Board, 318, 321.
- Piez, Charles, 216.
- Poindexter bill, 32.
- Price fixing, 16, 42, 45; testimony of General Goethals on, 69, 152; development of principles of, 345.
- Priority Board, 50.
- Procedure, contracting: statutory principles of, 13; war time purchase methods and priorities, 13; Kernan report on ordnance manufacturing policy, 14; contract control in Food and Fuel Act, 15; provision of Overman Act to prevent collusion, control speculation and fix prices, 16; theory of government war contracting, 18; administrative principles of, 19; formal requirements of a valid contract, 19; contracting officer disclaims interest under oath, 20; advertising for proposals standard procedure, 21; elimination of contract broker with contingent fees, 22; purchasing through jobbers discontinued, 22; joint powers of purchase and industrial control, 25; contract procedure in Army Ordnance Office, 100.
- Procurement orders, 11, 19; prewar use of, by Engineer Corps, 31, 33, 63, 115, 313.
- Production, aircraft, 26.
- Production Division (Ordnance Department), 121.
- Profiteering, 42, 90, 150, 152, 154, 223, 240, 262.
- Profits: camps, 75; aircraft, 239, 244; federal taxes on, 340.
- Provost Marshal General, 9.
- Purchase and Supply Branch (Division of Purchase, Storage and Traffic), 25, 32, 66.
- Quartermaster Corps: expenditures of, 10; relative importance of, 63; disposal of surplus of, 297.
- Quartermaster General's Office, 28; expenditures of, 63; prewar reorganization of, 64.
- Quistconk, 347.
- Ray, Justice, 44.
- Remington Arms Company, 125.
- Results, economic, 342.
- Requisitioned orders, 33.
- Requisitioning. *See* Commandeering.
- Returns Office (Department of the Interior), 19, 20.
- Revenue Act (October 3, 1917), 341.
- Rifles: expenditures for, 96, 121; factors affecting cost-plus contracts, 122; why the modified Enfield rifle was adopted, 123; insistence of rifle contractors on cost-plus contracts, 125; rifle production record of the government, 130; comparative output of rifles under cost-plus contracts, 131; record of Eddystone rifle plant, 132, 297, 310.
- Rock Island Arsenal, 15, 122, 130, 283.
- Rolls-Royce Motors, 233.
- Roosevelt, Colonel Theodore, 233.
- Schlacks, Charles H., 130.
- Sharpe, General H. G., 28.
- Shipping Board. *See* United States Shipping Board.
- Shipbuilding and repairing, 141; cost-plus contracts in, 148; four divisions of operation, 181; general policy of ship contract compensation, 185; principle of payment in agency contracts, 186; lump sum contracts, 188; analysis of shipbuilding contracts, 189; payments, 189; plant financing extensions and real estate, 194; subcontracts and control in construction, 195; contractual arrangements for requisitioned ships, 200; control of chartering requisitioned ships, 201; effects of ocean freight control on shipyard conditions, 202; requisitioning of incomplete ships, 203; contractors' fees in fabricated shipbuilding, 209; criticism of agency compensation system, 211; comparative fees at three fabricating yards, 217; subcontracting on plant construction, 220; public distrust of big business methods, 223; policy and practice in wooden ship contracts, 227, 229; elements of reaction and delay on contracts, 228; economic results of shipbuilding program, 347.
- Shipping Act (1916), 169, 171-172.
- Shipping Control Committee (United States Shipping Board), 201.
- Shipyards: housing, extent and results of, 265.
- Siems-Carey-Kerbaugh Corporation, 259, 262.
- Signal Corps, 7; expenditures of, 9, 28, 49-50, 68, 232, 245, 247-249.
- Sligh, Major Charles R., 256-257, 260.
- Sloan Shipyards Corporation, 192-193.
- Spad airplanes, 247.
- Springfield Arsenal, 122, 130.
- Springfield rifles, 122-124, 132.
- Spruce production: commandeering of, 49, 229; conditions surrounding spruce-fir contracts, 253; first and second stages in, 256-257.
- Spruce Production Division, 256, 258, 260.
- Squier, General George O., 50.
- Standard-J airplanes, 245.
- Standardization, efforts at, 37.
- Starrett, Major W. A., 92.
- State, Department of, 175.
- Stayton, Colonel Norris, 299.
- Subcontracting: provision for, 84, 115; in shipbuilding contracts, 189, 219, 221; in lump sum contracts, 195; on plant construction, 220; in airplane spruce production, 262; in housing contracts, 272; classification in liquidation, 328.
- Submarine Boat Corporation (Newark), 183, 185, 214-215, 217-218.
- Submarine boats, 141, 148, 168.
- Submarine chasers, 141, 217.
- Superior Board of Contract Review, 71.
- Supply system, peace time and war time cost of, 12; organic principle of governmental supply system, 23; prewar prevalence of bureau supply system, 24; belated event of consolidated supply service, 29; army supply offices hindered by peace time forms, 34; reorganization of army supply system, 64; official recognition of failure of bureau supply system, 65; defects of bureau system in theory and practice, 67; purchase procedure under reorganized system, 69.
- Sweeney, Captain Thomas A., 258.
- Talbot Commission, 88.
- Tanks, 231.
- Taxes: on war contracts, 340; Munitions Manufacturers' Tax, 189, 340.

- Thomas, Senator Charles F., vii.
- Tonnage: contracted for, 176-177; requisitioned by Emergency Fleet Corporation, 203-205, 208-210, 213-217.
- Trigg, Ernest T., 104.
- United States Chamber of Commerce, 59.
- United States Circuit Court, 18.
- United States Housing Corporation, vii, 8; expenditures of, on account of contracts, 10, 78; building program, 78; creation and organization of, 265; contractors' fees in projects of, 268-269; methods employed in selection of contractors, 270-271, 273; geographical scope and varied character of work of, 275; work of the Cost Engineering Section, 278, 280-283; effect of armistice on contractual arrangements and policy of, 284-286.
- United States Shipping Board, vii, 8; expenditures of, 10, 11, 37, 40, 78; building program, 78; appropriations for and wide extent of contracting powers, 169; elaboration of program, 171-173; effect of outbreak of war on building operations, 174-175; authorizations, commitments and expenditures, 178; policy under war time conditions, 179-181; commandeering powers, 181, 184; contractual policy, 185, 196; ships requisitioned by, 198-199; contractual arrangements for requisitioned ships, 200; creation of Chartering Committee, 202; requisitioning of incomplete ships by, 203, 205-206, 208, 214; position of, in controversy regarding Hog Island contract fee, 215, 223, 224; policy and practice of, as regards wooden shipbuilding, 227, 230, 254, 289, 348.
- Volume of contract operations, 8.
- Wages: camp construction, 89; housing contracts, 273-274.
- War contract profits, federal taxes on, 340.
- War Credits Board, 237, 261, 339.
- War Department, expenditures of, 9-10.
- War Department Claims Board, 314.
- War expenditures, Select Committee of the House on, 55, 68, 102, 232, 252, 288, 293.
- War Finance Corporation, 339.
- War Industries Board, 21, 25; War Department representation on, 26; contractual functions of, 29-30; advisory control of contracts in, 58-59; severance from Council of National Defense, 61, 69-70, 101; procedure in relations of, to Ordnance Department, 102, 104, 138, 152, 155, 157, 243, 273, 318, 335, 344, 350.
- War Munitions Board, 59.
- War Purchasing Board (Council of National Defense), 58.
- War time contracting, basic factors in, 6.
- West, Ex-governor, 256.
- Winchester Repeating Arms Company, 125.
- Wittman-Lewis Aircraft Company, 234.
- Woodhouse, Henry, 250.
- Wooden ships. *See* Shipbuilding and repairing.
- Wright-Martin Aircraft Corporation, 233, 245, 249.