

PRESIDENT'S SECRETARY'S FILE
Subject File
War Production Board: "War
Progress": 8/6-10/30/43
Box 173

CONTINUED

The President

WAR PROGRESS

Confidential
(British Secret)

DECLASSIFIED
EO 11652, Sec. 5(a) and 5(D), or 94
Commerce Dept. Letter, 11-18-72
By NAD, Date MAR 29 1973

Production Gets Second Wind
Scorecard on Merchant Shipping

Number 156

September 11, 1943

Production Regaining Momentum

Munitions increase for third consecutive month, but year's schedule is farther away. Naval vessels enter \$1,000,000,000 class. Signal equipment improves.

WAR PRODUCTION has got a second wind, but it is not yet sprinting.

Munitions output last month rose 4% to \$5,440,000,000 (preliminary). So for three months the rate of gain has been slowly increasing, both in dollars and in percentages, as follows:

	Gain from	
	Preceding Month	
	Dollars	%
May.....	\$ Nil	Nil
June.....	90,000,000	2%
July.....	175,000,000	3
August.....	219,000,000	4

These successive gains have lifted production above the \$5,000,000,000 plateau of April, May, and June, but they are not sufficiently large to suggest that total munitions output for the year will come close to the \$65,000,000,000-odd schedule. If monthly gains from now on were to continue at the August rate, munitions for the year would amount to \$62,500,000,000. Monthly increases of much more than \$219,000,000 hardly seem likely; indeed, past performance hardly warrants more than a hope that this level of average gain will be maintained.

Construction once again declined, as per plan. And the gain in total output—munitions and war construction—was only 3%, to \$6,350,000,000. In this case, the distance from the plateau is not so marked—\$350,000,000 above the

\$6,000,000,000 April-June level.

With one-third of 1943 left, 39% of the year's scheduled production of munitions and construction remains to be done (chart, page 3). One of the most advanced programs is construction, with 76% done and 24% to go. This, obviously, is because most of the year's building of bases and industrial facilities was concentrated in the early months (chart, page 4).

MAJOR PROBLEM: AIRPLANES

Munitions schedules as a group—including aircraft, army ordnance, naval vessels, and merchant ships—are 41% unfinished. Among the major munitions programs, merchant vessels have only 39% to go, while airplanes have 48%. Planes are still one of the most steeply rising and hardest-to-make programs, and account for a mounting proportion of the total program.

A year ago, plane production was 7% of total munitions and war construction; today it's 14%, and in 1944 military planes will amount to 21%. If all aircraft and related munitions are included, then the aircraft program accounts for 31% of total war output today and will account for 42% next year. Thus, it becomes increasingly apt to say that "As airplanes go, so goes war production."

Aircraft

Last month's record bears this out most emphatically. Aircraft and related munitions accounted for more than half of the \$219,000,000 gain in munitions.

As noted in WAR PROGRESS last week, the 7,570 planes (excluding 42 Targets

and Drones) accepted were 3% ahead of July (WP-Sep4'43,p1). But more than 900 were Liberators and Flying Fortresses, which lifted the increase in both value and airframe weight to 7%. This redramatizes the trend toward heavier models—especially bombers. The average airframe weight of each plane accepted in August was 7,800 pounds, as against 5,600 a year ago and 3,800 in August, 1941. By August next year, the average weight per plane is scheduled to rise to 10,000 pounds.

Design changes and labor problems again slowed up production last month, and acceptances on a weight basis fell 13% behind the W-6 schedule. Bombers made the best showing among combat planes relative both to July and to schedule, as the following table shows (airframe weight basis):

	August Acceptances as % of	
	July	W-6
Total planes.....	107%	87%
Combat planes.....	110	87
Bombers (including flying boats)....	111	90
Fighters.....	105	79
Naval reconn.	77	36
Transports.....	95	83
Communications.....	96	97
Trainers.....	85	96

IN THIS ISSUE:

PRODUCTION REGAINING MOMENTUM	1
PRODUCTION PROGRESS PRELIMINARY	5
KEY STATISTICS OF THE WEEK	7
SCORECARD ON MERCHANT SHIPPING	8
LEND-LEASE AT BILLION-DOLLAR MARK	9
MERCURIAL MERCURY	11
WAR PROGRESS NOTES	13
REPORTS ON REPORTS	13
SELECTED MONTHLY STATISTICS	14
PRODUCTION PROGRESS (AIRCRAFT AND AIRCRAFT MUNITIONS).	15-16

Despite model revisions on the Flying Fortress and the Liberator, this group ran only 3% behind schedule. Douglas (Long Beach), Vega (Burbank), and Consolidated Vultee at San Diego and Ft. Worth were able to keep up to schedule. Ford at Willow Run turned out 116 Liberators, 38% more than in July but 7% less than scheduled. And at Boeing, Seattle, the 190 Forts assembled were 5% below July and 10% under schedule; employment shortages continued.

SUPER BOMBERS START ROLLING

Acceptances of long-range heavy (super) bombers are likely to be a regular feature of monthly airplane production from now on. Four B-29s were assembled at Boeing, Wichita. This was nine below schedule, but followed the initial acceptance of seven at the same plant during July; 20 B-29s are on the docket for September. Another superbomber—the B-32—is being worked on by Consolidated Vultee.

Acceptances of 467 twin-engined medium bombers were 16 planes ahead of July but 19% short of schedule; the deficit was largely accounted for by two of North American's plants working on the Billy Mitchell (B-25): At Inglewood, the B-25 was being redesigned as an attack bomber—a major change—and, at Kansas City, a contributing factor was failure to receive R2600B engines from Wright's Lockland plant.

BREWSTER AND CURTISS

At 619 planes, acceptances of 1-engined navy bombers were even with July, but 17% short of schedule. A midmonth strike at Brewster, Johnsville, cut output of SB2A Buccaneers from 89 in July to 54; 97 were scheduled. Although Curtiss at Columbus turned out 18 SB2C Helldivers, three more than in July, the plant was still producing far below

estimated capacity—100 were called for in August.

Once again bunching of design changes besieged the 2-engined Lightning, and Lockheed at Burbank fell 61% under July and 73% under its schedule, making 102 planes instead of 376. If the Light-

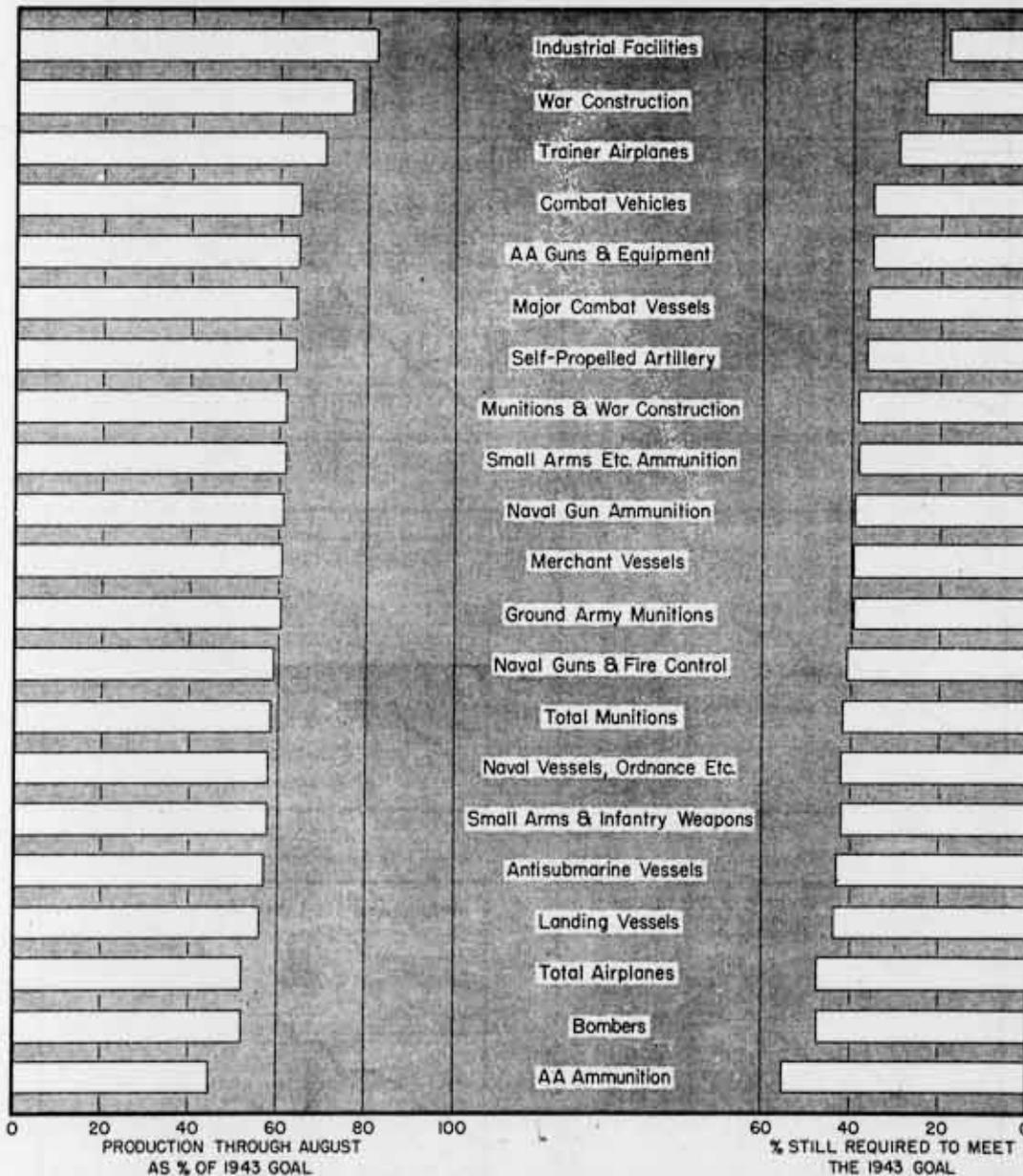
ning had not failed, the lag in fighter production would have been less than 10%, as against 21%, for most fighter plants did well.

For example, Bell at Buffalo was one plane ahead of its schedule of 500 Airacobras (P-39s)—a volume item to Russia

THE FORE AND AFT OF 1943 WAR OUTPUT

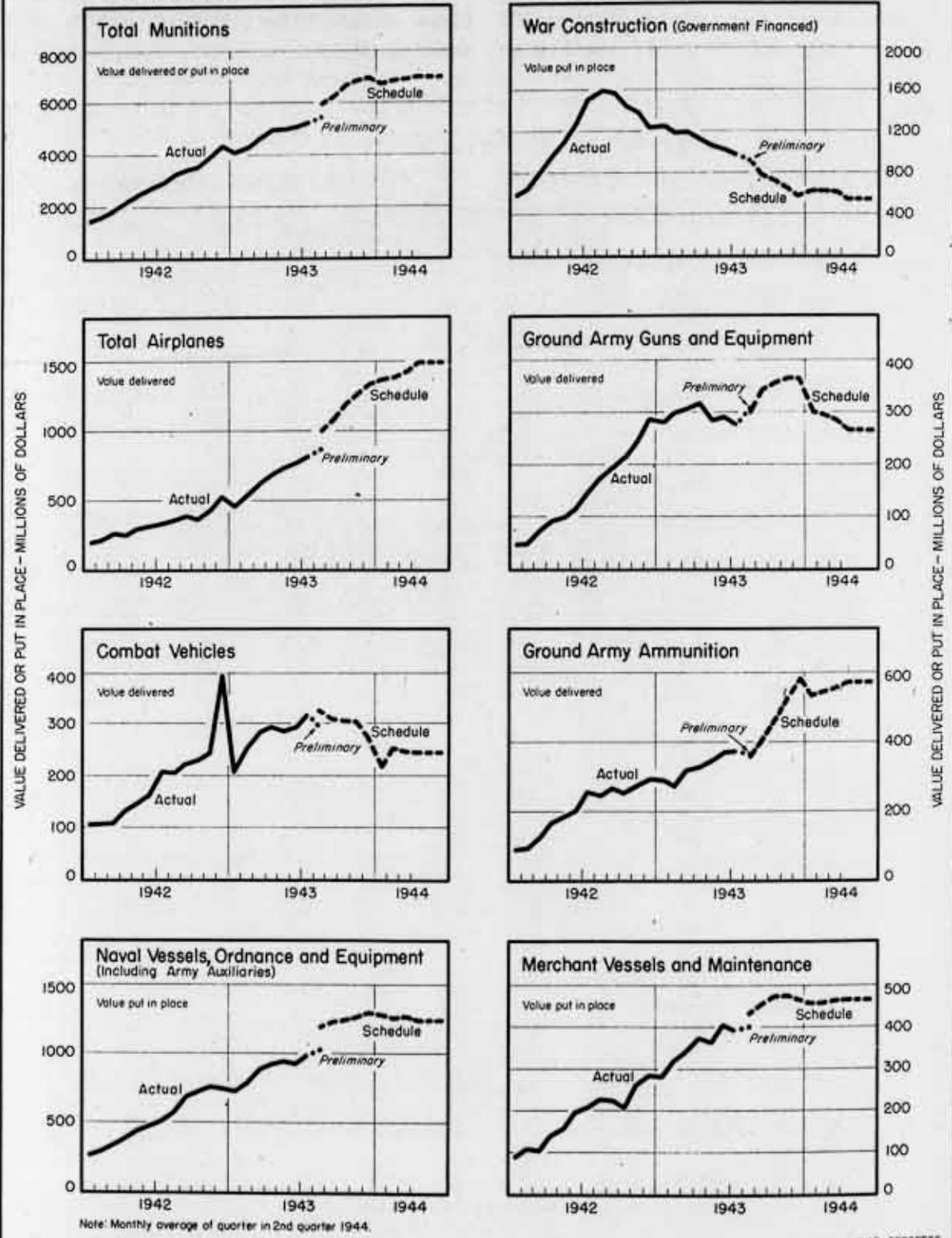
This much has been done in 8 months:

This much remains to be done in 4:



MUNITIONS OUTPUT GETS SECOND WIND, UP 4%

Monthly gain over July is the largest since April. Airplanes hit a new high for the seventh consecutive month, naval vessels for the second.



under lend-lease—and the following plants were exactly on schedule:

<u>Plant and Model</u>	<u>No. of Planes</u>
Curtiss, Buffalo (P-40 Warhawk).....	463
Republic, Farmingdale (P-47 Thunderbolt).....	310
Grumman, Bethpage (F6F Hellcat).....	250
General Motors, Linden (FM Wildcat).....	170

Republic at Evansville did not do so well as Republic at Farmingdale. Because of rearrangement of the productive system in the fuselage department, only 90 Thunderbolts were accepted at Evansville, 15 short of schedule. Compared with July, however, there was a gain of 38%. North American at Inglewood managed to turn out 170 Mustangs (P-51s), 89 more than July; but shortages of

radiators and engines held acceptances to 77% of schedule.

For the third successive month, acceptances of 2-engined Curtiss C-46 Commandos remained at 34 planes; the schedule called for 60; reportedly, design changes in the engine cowl, cabin heater, and control system were limiting factors.

Douglas' new plant at Chicago has yet to have a plane accepted. One 4-engined C-54 Skymaster was scheduled for July, and again last month; however, the Santa Monica plant produced six Skymasters in August, as scheduled.

Army Ordnance

Army ground munitions, at \$1,155,000,000, gained 3% as against July's 5%. The deficiency from schedule was nominal —\$19,000,000, or 2%.

The improved showing of ground signal equipment (including ground-to-air) in

PRODUCTION PROGRESS - Preliminary

Value delivered or put in place - millions of dollars.

	August Preliminary	July Actual	% Change	August Schedule*	% Deviation August Prelim. vs. Schedule
TOTAL MUNITIONS AND WAR CONSTRUCTION	\$ 6,350	\$ 6,155	+ 3%	\$ 6,813	- 7%
TOTAL MUNITIONS	5,440	5,221	+ 4	5,903	- 8
Aircraft and Aircraft Munitions	1,970	1,844	+ 7	2,197	-10
Airplanes, Spares, Equip. and Maint., etc.	1,657	1,557	+ 6	1,881	-12
Aircraft Ordnance	160	138	+16	163	- 2
Aircraft Signal Equipment	153	149	+ 3	153	0
Ground Army Munitions	1,155	1,117	+ 3	1,174	- 2
Combat Vehicles and Equipment	319	345	- 8	349	- 9
Guns and Equipment (a)	306	277	+10	298	+ 3
Army Ammunition	367	370	- 1	362	+ 1
Ground Signal Equipment	163	125	+30	165	- 1
Naval Vessels, Ordnance and Equipment (incl. Army Auxiliaries)	1,025	983	+ 4	1,193	-14
Merchant Vessels and Maintenance	400	392	+ 2	434	- 8
Miscellaneous Munitions	890	885	+ 1	905	- 2
WAR CONSTRUCTION (Government Financed)	910	934	- 3	910	†

* As of July 1 for Construction; as of August 12 for Aircraft and Spares; as of August 1 for all others.
 (a) Artillery and equipment; antiaircraft guns and equipment; small arms and infantry weapons.
 † Schedule used for preliminary.

July was extended into August—the most noteworthy development of the month. For the first time, this group all but made schedule, rising 30% from \$125,000,000 to a high of \$163,000,000; the goal was \$165,000,000. Lags behind schedule ran to 7% in July and 27% in June.

COMBAT VEHICLES PAST PEAK

On the other hand, combat vehicles and equipment, which consistently have run close to schedules, lagged 9% behind. This group may now have passed its peak; August output of \$319,000,000 was off 8% from July's \$345,000,000 record. Guns and equipment, however, at \$306,000,000 were 10% higher than July and 3% above schedule.

Ammunition was bigger than either of the weapons groups with output valued at \$367,000,000—little changed from July and barely ahead of schedule. But ammunition is destined, by spring, to become the outstanding army ordnance program, passing combat vehicles and guns combined. This epitomizes the shift from capital to expendable items throughout the war program.

Ammunition for small arms ran counter to this expendable-item trend, taking a 10% tumble. This is attributed to much-needed vacations and manpower shortages which cut July brass strip production. Furthermore, estimated August and September strip output is low, and SA ammunition may not immediately resume its rise.

BAZOOKA ROCKET BACK

Other infantry weapon ammunition partly offset these declines; the drop for the SA and infantry weapon group as a whole was only 6% and, at \$236,000,000, output was exactly on schedule. The 2.36-inch bazooka antitank rocket, out of production since May,

came back at 90% of schedule with 316,000 rounds.

The rest of ground ammunition—artillery, tank gun, and antiaircraft—was up 10% to \$131,000,000—4 ahead of schedule. Here, a shift from armor-piercing to high-explosive shot and shell showed up strikingly. For artillery and tank gun ammunition, HE jumped 24% above July production; nine of 14 important items made or exceeded elevated goals. In contrast, output of armor-piercing shot fell 13%; schedules, however, were down 22%.

In the combat vehicle group, armored cars again were slow, lagging 45% behind sharply rising schedules.

Artillery had a good month; self-propelled, wheeled, and antiaircraft all passed schedule. Self-propelled guns, with output valued at \$86,000,000, were outstanding: 32% above July.

A 5% gain registered by small arms and infantry weapons was due almost entirely to the Garand rifle and the .30-caliber carbine. Garand, with 105,000 accepted, was 16% up from July and 1% over schedule; 273,000 carbines were 20% better than July but 3% under their goal.

Naval Ships

The estimated value of work done on naval vessels last month (including naval ordnance and equipment, and army auxiliaries) increased 4% over July and entered the billion-dollar class for the first time: \$1,025,000,000.

Deliveries of naval vessels alone reached a new peak. At 276,600 displacement tons (preliminary), the gain over July was 36%, and the deficit from the first-of-the-month schedule was only 8%, as against recent shortages ranging from 12% to 22%.

All principal groups were up, with minor combats showing the widest gain—

KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program - Checks paid (millions of dollars)	1,731	1,478	1,652	1,516	1,254
War bond sales (millions of dollars)	208	180	147	152	167
Wholesale prices (1926=100)					
All commodities	102.8 ^p	102.9 ^p	103.0 ^p	102.9	99.1
Farm products	123.3	124.0	125.0	122.0	106.7
Foods	104.7	105.5	106.6	106.4	101.4
All other than farm products and foods	97.3 ^p	97.3 ^p	97.2 ^p	96.6	95.7
Petroleum:					
Total cargoloadings	57,084	55,875	53,159	52,475	55,234
Movement of cars into the East	28,051	28,125	27,413	25,870	27,442
East coast stocks for civilian use(9-10-41=100 Sess. Adj.)	40.3	39.1	34.7	32.5	59.1
Total stocks of residual fuel oil (thousands of barrels)	67,675	67,250	66,714	68,782	78,602
Bituminous Coal:					
Production (thousands of short tons, daily average)	2,022	2,002 ^p	2,028	2,113	1,918
Exports (no. of freight cars unloaded for export Friday, exclusive)					
Atlantic Coast ports	2,843	2,651	2,701	1,527	1,612
Gulf Coast ports	360	351	336	459	287
Pacific Coast ports	1,370	1,399	1,320	1,003	626
Unused steel capacity (% operations below capacity)	-0.3%	0.6%	2.2%	0.9%	3.6%
Department store sales (% change from a year ago)	0	+1%	+7%	+14%	+26%

p. preliminary c revised

55%. The chief factor here was the 20% ahead-of-schedule delivery of destroyer escorts; 36 were turned out, 10 more than in July and six above schedule. In July, no major group made schedule, but in August both major and minor combat vessels ran 3% ahead of the plan:

	Deliv- (tons)	% Change from July	% Change from Sched.
Major combats	76,200	+41%	+3%
Minor combats	125,500	+55	+3
Landing ves..	56,400	+8	-25
Aux. & trans.	18,500	+18	-37
Total.....	276,600	+36%	-8%

More than a third of the major combat tonnage was accounted for by the 27,100-ton aircraft carrier "Intrepid." This was the first carrier of that size to be delivered since May, when the "Bunker Hill" was completed. The 10,-

000-ton light cruiser "Biloxi" was also delivered. And there were 10 large destroyers of 2,100 tons each (compared with 12 in July), two more than planned.

Aircraft carrier escort deliveries reached the highest level since June, 1941, when the merchant ship "Moormacmail" was converted to a baby flat-top. The seven completed were four more than in July and right on schedule.

LANDING VESSELS REBOUND

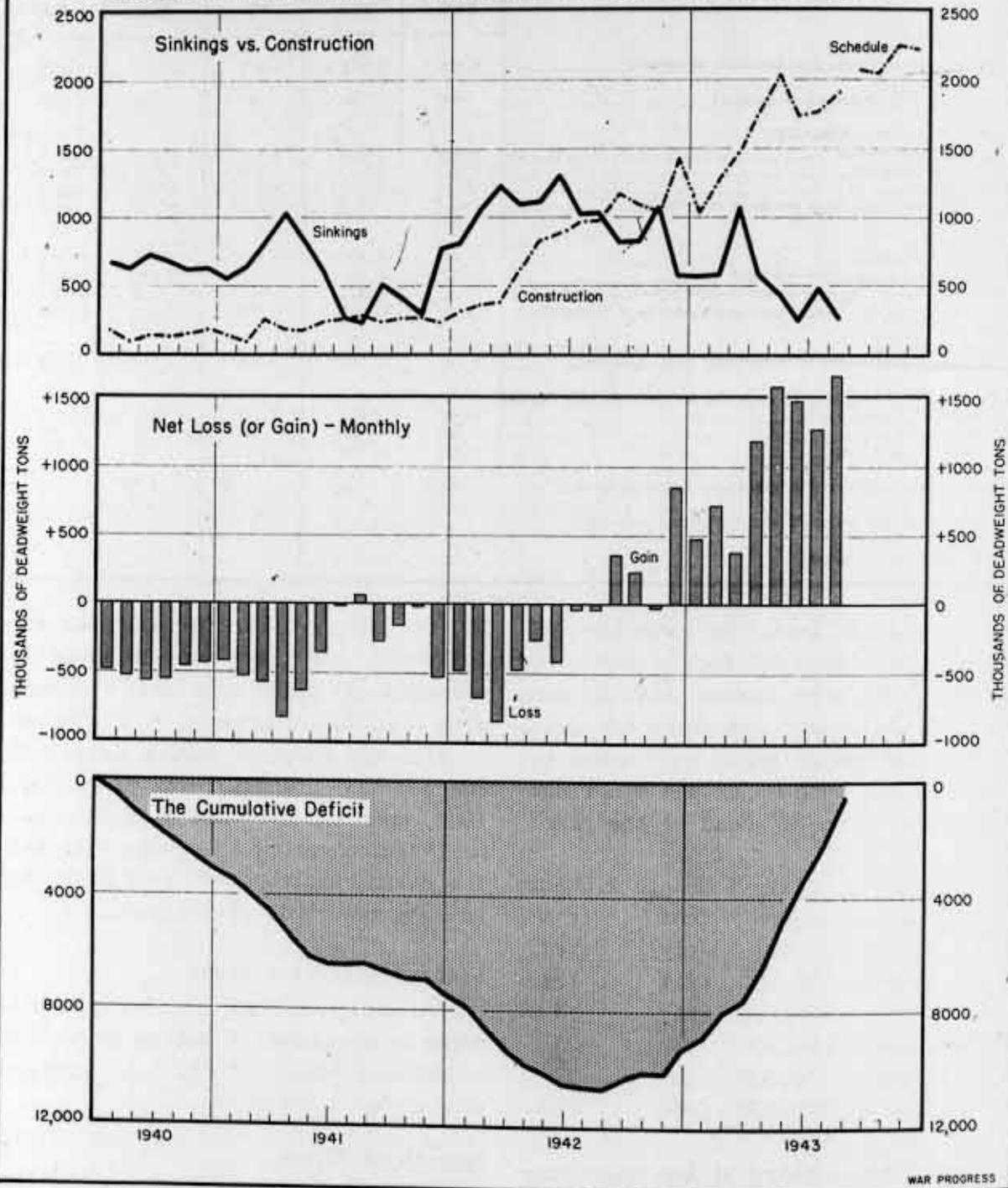
Following a drop in July, landing vessels rebounded in August to mark up a monthly gain of 8%; but schedules called for a 44% rise.

Merchant Ships

Merchant ship construction held more or less level with the preceding two months; 160 ships were delivered as against 158 in both July and June. Deadweight tonnage was up slightly—by 18,-

SCORECARD ON MERCHANT SHIPPING

August sinkings drop 50% from July; construction is right up close to peak. Consequence: Net additions to United Nations fleet reach a record high.



THE UNITED NATIONS MERCHANT FLEET IS NOW JUST ABOUT BACK TO WHERE IT WAS IN JUNE, 1940. SINKINGS LAST MONTH WERE AROUND 250,000 DEADWEIGHT TONS, OR HALF THE JULY LEVEL, WHEN THE SICILIAN INVASION LIFTED LOSSES. AT THE SAME TIME, AUGUST DELIVERIES OF NEW

VESSELS WERE CLOSE TO THE ALL-TIME PEAK, AND NET ADDITIONS TO THE FLEET NEARLY WIPED OUT WHAT WAS LEFT OF THE CUMULATED DEFICIT. NEXT MONTH'S SCORECARD WILL BE CHANGED. THE BOTTOM CHART WILL BE CALLED "THE CUMULATIVE DEFICIT OR SURPLUS"!

200—to 1,679,000. Nor was work done notably higher. Preliminary data indicate no great change in value put in place over July (table, page 5).

As a result of this leveling off, deliveries fell short of schedule by nine vessels and 62,600 tons.

LIBERTIES ON EVEN KEEL

Liberty ship completions totaled 110—one more than in July, though two behind schedule. On a tonnage basis these vessels exceeded July—1,188,000 against 1,176,000. Fifteen standard-type vessels came through to equal sched-

ule, but the deadweight tonnage of those completed was slightly under the goal and 8% below July, when 16 such ships were delivered. Thus, total dry cargo tonnage (Liberty and standard) just about equaled July's figure and was a shade above schedule.

The uptrend in tanker deliveries continued—16 were completed as against 15 in July. But 20 were scheduled.

There were also three aircraft transports, a 10,000-ton troop transport, and the first of a new-type 6,200-ton transport. The latter came through ahead of schedule.

Lend-Lease at Billion-Dollar Mark

Record-breaking July exports are marked by sharp gains for Russia, Turkey, Algeria, and China. Low-value petroleum products constitute one-sixth of Soviet tonnage.

LEND-LEASE exports in July passed the billion-dollar mark for the first time, amounting to \$1,021,000,000. To a certain extent, the showing was helped along by the inclusion of \$55,700,000 in planes which were flown away during previous months. But even so, the net total, at more than \$975,000,000, would far overtop the previous high of \$822,000,000 in May.

Shipments to Russia (including \$24,300,000 in previously unreported flyaway planes) amounted to \$230,000,000, a shade above the previous high of \$227,000,000 in April. Excluding these flyaway planes, the total was the second highest month on record and marked a rapid recovery from the June total of \$139,600,000. This was one of the sharpest month-to-month gains for a major lend-lease country ever recorded.

The rise is directly traceable to a threefold increase in exports of muni-

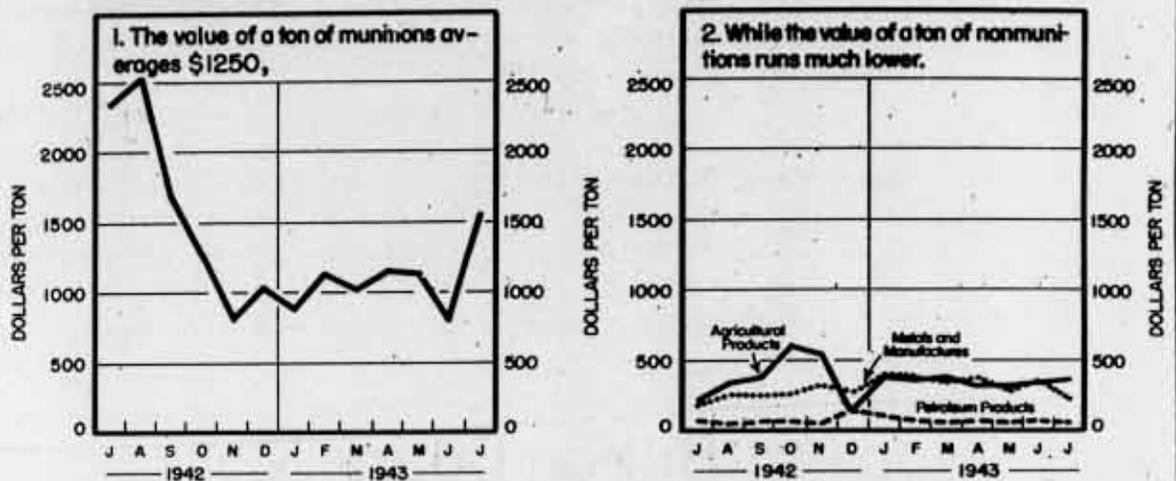
tions, just as the June drop is directly traceable to the sharp decline in munitions shipments to the Soviet. However, on a tonnage basis, exports to Russia during June were not unusually low (chart, page 10), amounting to 12.4% of lend-lease tonnage, as compared to 11.4% in May, and 10.4% in July. But heavy preference was accorded low-value petroleum products, which account for about one-sixth of the Soviet tonnage during June and July. Petroleum products run to only about \$60 per ton, as against \$300 for agricultural products, \$350 for industrial products, and more than \$1,200 per ton for munitions.

DROP IN EXPORTS TO U.K.

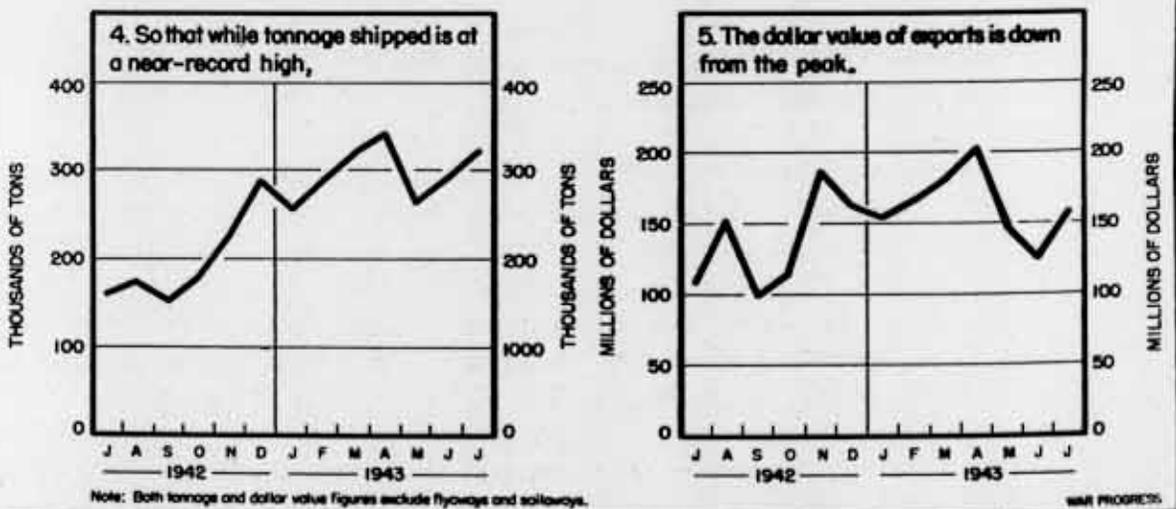
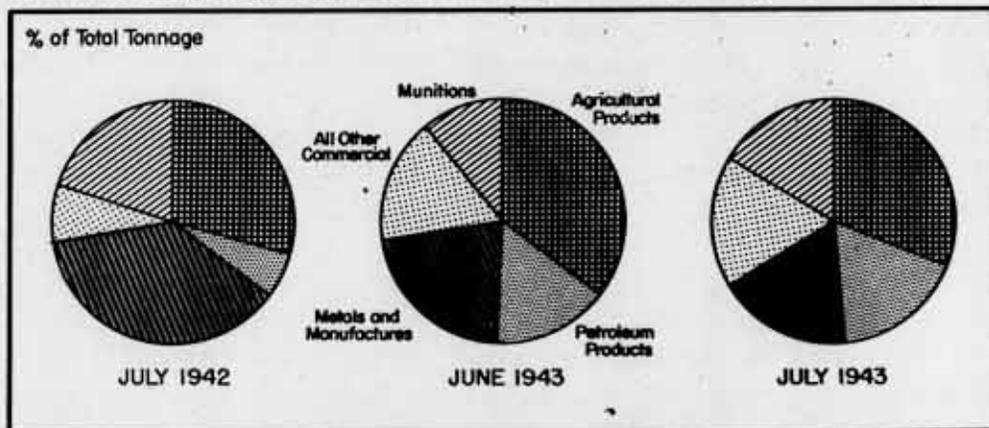
The jump in munitions exports to Russia during July raised the Soviet proportion of lend-lease to 22.5% of the total value, as against only 17.6% in June. Shipments to the United Kingdom dropped from \$425,700,000 in June to \$392,000,000, only 38.5% of the total, as against 53.8% for the previous month. Exports to Algeria and Turkey have risen sharply in recent months and include

THE RUSSIAN LEND-LEASE PARADOX

Waterborne tonnage shipped has been rising, but the value has been erratically flat. Explanation:



3. But since July, 1942, there has been a shift to nonmunitions (notably in June 1943),



Note: Both tonnage and dollar value figures exclude flyways and sailways.

substantial shipments of munitions:

	<u>May</u>	<u>June</u>	<u>July</u>
	(millions)		
U.K.	\$393.5	\$425.7	\$392.0
Russia.....	177.5	139.6	230.0
Egypt.....	101.9	51.5	105.4
Australia.....	35.5	27.9	70.1
New Zealand.....	13.4	6.8	7.1
India.....	29.3	64.8	64.2
Iran.....	1.6	1.7	1.6
Iraq.....	6.4	4.9	10.8
Union of S. Africa	7.8	11.3	5.9
French Morocco....	1.3	*	.8
Algeria.....	6.0	18.2	54.2
Nigeria.....	1.4	1.6	1.1
Turkey.....	8.0	4.8	31.4
Gold Coast.....	.1	1.2	*
Brazil.....	8.1	3.4	6.9
China.....	1.8	1.2	4.0

*Less than \$50,000

Shipments to China, as the table shows, are also rising, but they still represent only a fraction of the total—\$4,000,000 out of \$1,000,000,000.

Mercurial Mercury

With reserves stored up and current supply 36% ahead of requirements, restrictions are being eased. Plans call for reducing domestic output, curtailing imports.

ABOUT a year ago Rommel was at the gates of Cairo, and it looked as if the Axis might soon control the entire Mediterranean. Spain, already pro-Axis, was on the fence: to join or not to join the Axis. Since Spain was the second largest mercury producer in the world (Italy was the largest), the United States hastened to buy 30,000 flasks—each flask holds 76 pounds—of Spanish mercury for shipment to Great Britain, where it could be held for use by the United Nations.

These 30,000 flasks are still intact. In addition, a 45,000-flask stockpile

ITALIAN MERCURY

ITALY'S capitulation will deprive the Nazis of a mercury supply estimated at 76,000 flasks annually. However, the Nazis are reported to have built up substantial stockpiles of the metal and may not miss Italy's output for some time. Meanwhile, the Allies are faced with the problem of disposing of the Italian mercury supply at a time when their own supply-demand position is comfortable.

has been built up in the United States. This has been accomplished by greatly increased U.S., Canadian, and Mexican production and by curtailing civilian use. In view of wide use of mercury in pharmaceuticals, dental preparations, electrical apparatus, industrial instruments, medical thermometers, preservation of lumber, etc., essential civilian and industrial consumption (largely for indirect war uses) still amounts to 30% of the total—20,000 flasks annually.

The big drain comes from war demand in chemical warfare, munitions, ship-bottom paint, scientific instruments, and so forth, and overall domestic consumption today is about two and one-half times the 1939 level. Estimated 1943 requirements run to almost 70,000 flasks, viz.:

<u>User</u>	<u>Requirements</u> (in flasks)
War Department.....	28,030
Navy Department.....	9,024
Aircraft.....	500
Maritime.....	5,319
Agriculture Department..	4,644
Essential civilian and indirect war uses.....	20,070
Foreign.....	<u>2,177</u>
Total.....	69,764
Estimated 1943 supply is 95,000 flasks	

(not including stockpiles here and in Britain), or 36% above indicated requirements, and plans call for reducing domestic output in 1944 by 20% and curtailing imports by a similar percentage. Meanwhile, conservation restrictions are being eased to permit greater use of mercury (1) as a lumber preservative, (2) in paint for ships of all types, (3) in agriculture to increase crop yield, and (4) in pigments (instead of cadmium).

SITUATION REVERSED

The easier situation today is in contrast to that of 1940, 1941, and 1942. Back in 1940 the problem was to boost production to meet rising consumption. To this end, the U.S. Bureau of Mines and the Geological Survey explored and tested new deposits—mercury deposits are usually small and scattered, and new discoveries are necessary to maintain, let alone lift, output. The War Production Board encouraged the development of new mines, expansion of existing properties, reopening of abandoned mines, and cooperated in planning the working of the new large Canadian deposit at Pinchi Lake.

DOMESTIC OUTPUT TRIPLED

Moreover, as early as 1941 the Treasury bought mercury for stockpiling purposes. An active purchasing program was later initiated by the Metals Reserve Company which offered long-term contracts to buy mercury at \$192 a flask, thus assuring mines of an extended market at a near-ceiling price. Back in August, 1939, mercury sold at \$86 a flask on the open market and advanced rapidly to \$199 in June, 1940.

As a result of these developments, domestic output tripled, but even so, it was not enough to cover consumption:

	Domestic Production	Domestic Consumption & Exports	Surplus or Deficit
	(in flasks)		
1939..	18,633	n. a.	
1940..	37,777	36,417	+1,360
1941..	44,921	47,390	-2,469
1942..	51,100	73,624	-22,524
1943..	50,000	69,764	-19,764

Imports, largely from Mexico and Canada, helped to make up the deficiency:

	Imports for Consumption
1939.....	3,499
1940.....	171
1941.....	7,740
1942.....	39,971

Indeed, expansion in Canadian and Mexican mercury mining has lifted Western Hemisphere production to the point where under present prices the U.S. has become entirely independent of Spanish and Italian mercury output.

Plans now call for tapering off federal purchases of mercury. No large new long-term foreign contracts—with Mexico and Canada—will be negotiated during a current 90-day moratorium. In addition, domestic production may be gradually reduced—by curtailing labor assistance for mines, halting federal financing of new projects, and withholding priority assistance for expansion.

SEEK 100,000-FLASK RESERVE

However, a domestic contingency reserve of 45,000 flasks may be built up to 100,000 flasks before any drastic curtailment measures are taken. Only a year ago, just when the nation's mercury problem was regarded as solved, Russia sought immediate delivery of 23,570 flasks. Shortly after that, Chemical Warfare came in for an unexpected request—24,000 flasks. Similar emer-

gency demands have to be guarded against. Meanwhile, 14,000 flasks from the U.S.-owned stockpile of 30,000 flasks, now in Great Britain, are to be released to the United Kingdom.

But one big question remains: Now that the Allies have taken Italy, what will happen to the big Italian mercury output?

War Progress Notes

INCUBATOR BABY

TWO YEARS AGO, Conservation Order M-9 prohibited use of copper and brass in chicken incubators and simultaneously inspired development of a revolutionary all-steel radiator with far-reaching possibilities in automobiles, construction machinery, home-heating systems, refrigerators, and so on.

To keep his plant operating, Harold Smith, proprietor of the Smith Incubator Company, looked about Washington for substitute work. He came at a time when the War Production Board's Construction Machinery Division was worried lest copper shortages might force curtailment of engine radiator manufacture for construction machinery. The division persuaded Smith to work on developing a noncorrosive all-steel radiator and promised him aid in securing experimental materials.

Instead of using tubing in his radiator, Smith welded sheet steel together to give the effect of steel tubes. Not only did this reduce the danger of leakage, but it also speeded production and cut costs; the steel radiator can be assembled in half the time used for the copper-brass radiator, and it also weighs less. Corrosion was licked by dipping the radiator in a plastic-base compound.

In preliminary tests, the all-steel radiator kept the water temperature cooler than the copper-brass unit, with-

stood almost three times as much pressure per square inch, showed considerably less possibility of leakage after freezing. Within two weeks, these units will undergo official U.S. Army tests at Ft. Belvoir. After that, commercial production can be started.

Meanwhile, the Smith Incubator Company, now also making surface plates used in war production, has changed its name to Smith Tool & Engineering Company.

CONSERVATION CLICKS

IN THE THIRD QUARTER of 1942, when total construction reached a record peak of \$5,074,000,000, the program required 3,900,000 tons of finished steel (about 24% of the quarter's new supply). This year construction is slated to finish the third quarter at \$2,383,000,000, down 47% from a year ago. But use of steel in the program will decline even faster—some 67%, to 1,279,000 tons. And construction's share of the quarter's steel supply will tumble approximately two-thirds from its 1942 top to around 7%.

REPORTS ON REPORTS

Yielding the Price Line

Practically universal dissatisfaction with present efforts at price control is reported by *Complaints About Price Control* (restricted; pp. 6). Causes named by complainants: lack of adequate policing, scarcity of goods, public apathy, government inefficiency. Commonest complaint: prices are still rising. (Office of War Information, Bureau of Special Services)

Civilian Prospects

While civilian requirements so far have been met generally, there is cause for concern about the future, according to the Office of Civilian Requirements'

quarterly *Report to the War Production Board on Objectives, Policies, and Progress* (confidential; pp. 155). In addition to an overall summary of civilian needs and production, the report gives detailed information on six major civilian areas, and a product-by-product tabulation of 797 production programs. (War Production Board, Office of Civilian Requirements)

German Losses

Total German casualties for the period September 1, 1939, to June 30, 1943, were more than 4,000,000 men, according to an *Estimate of Casualties in the German Armed Forces Derived from Published Obituaries of Officers* (secret; pp. 19). The memorandum includes a description of the sources used and an explanation of the statistical adjust-

ments made in arriving at these figures. (Office of Strategic Services, Research and Analysis Branch)

Traffic in Copper

United States purchases of Latin American *Copper* (confidential; pp. 13) have increased sharply since the beginning of the war, more than offsetting the loss of European markets. Postwar dislocation of the industry would have a serious effect, particularly in Chile where copper constitutes 50% of the country's total exports. (Coordinator of Inter-American Affairs, Research Division)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

SELECTED MONTHLY STATISTICS

Consumer Expenditures - Retail Sales - Production

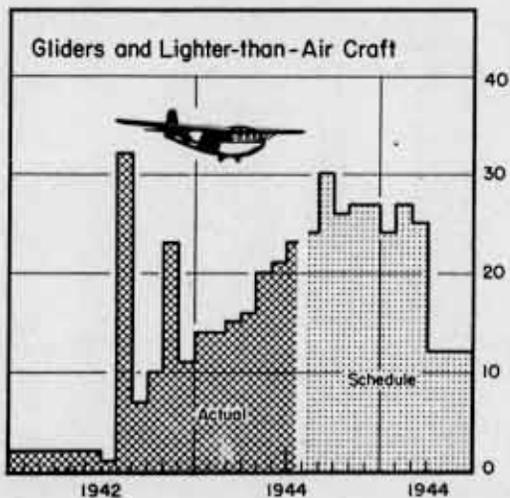
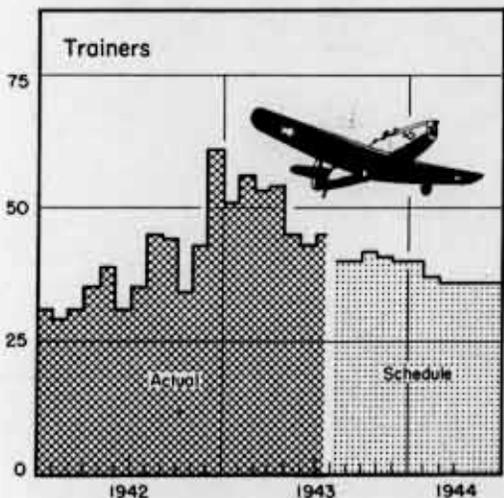
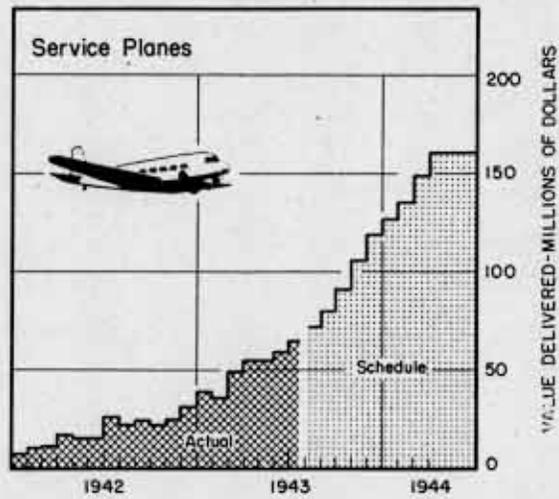
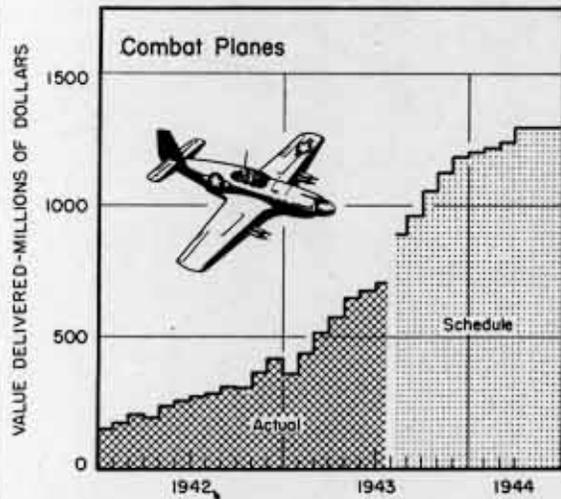
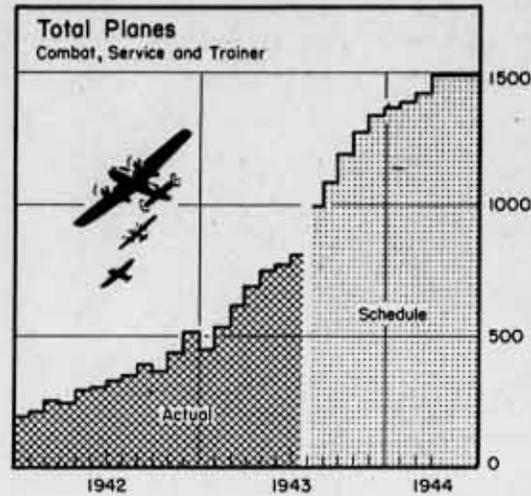
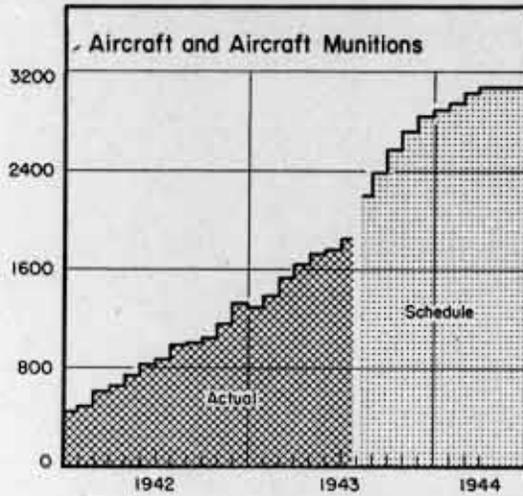
	Latest Month*	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Same Month 1939	Same Month 1937
CONSUMER EXPENDITURES (million dollars)	7,522*	7,387*	7,421*	8,352	6,572	5,096	5,279
Goods	5,087*	4,960*	4,994*	5,976	4,277	3,222	3,438
Services	2,434*	2,427*	2,427*	2,376	2,295	1,874	1,841
RETAIL STORE SALES - TOTAL (million dollars)	4,949*	5,189*	5,073*	4,431*	4,433	3,278	3,479
Durable goods	774*	827*	832*	635*	813	858	1,010
Nondurable goods	4,175*	4,362*	4,241*	3,796*	3,620	2,420	2,469
FOOD PRODUCTION							
Dairy Products (million pounds)							
Butter, creamery	181.3	•	•	•	186.6	182.2	171.7
Cheese	106.4	•	•	•	113.1	77.3	70.5
Evaporated milk	335.5	•	•	•	314.3	226.6	205.8
Meats - Total (incl. lard, million pounds)	1,690.0	•	•	•	1,447.0	1,033.0	771.0
Beef and veal	485.4	•	•	•	606.5	445.8	421.3
Lamb and mutton	78.1	•	•	•	66.9	53.1	52.4
Pork, including lard	1,126.0	•	•	•	773.2	534.3	297.0
Lard	200.1	•	•	•	139.0	93.6	41.7
Poultry and eggs							
Eggs (millions)	4,532.0	•	•	•	4,095.0	3,307.0	1,188.0
Poultry (receipts at 5 principal markets, million pounds)	24.2	•	•	•	34.4	27.8	20.8
PRODUCTION OF CLOTHING AND SHOES FOR CIVILIANS (1935-39=100) ¹							
Clothing and shoes combined	104	105	108	101	100	n.a.	n.a.
Clothing	106	108	111	103	100	n.a.	n.a.
Shoes	93	95	98	94	100	n.a.	n.a.

*July: Production of Clothing and Shoes for Civilians, Consumer Expenditures, June. Unadjusted. n.a. Not available. p Preliminary. r Revised. • Seasonal influences invalidate month-to-month comparisons.

CONFIDENTIAL

PRODUCTION PROGRESS

Aircraft and Aircraft Munitions

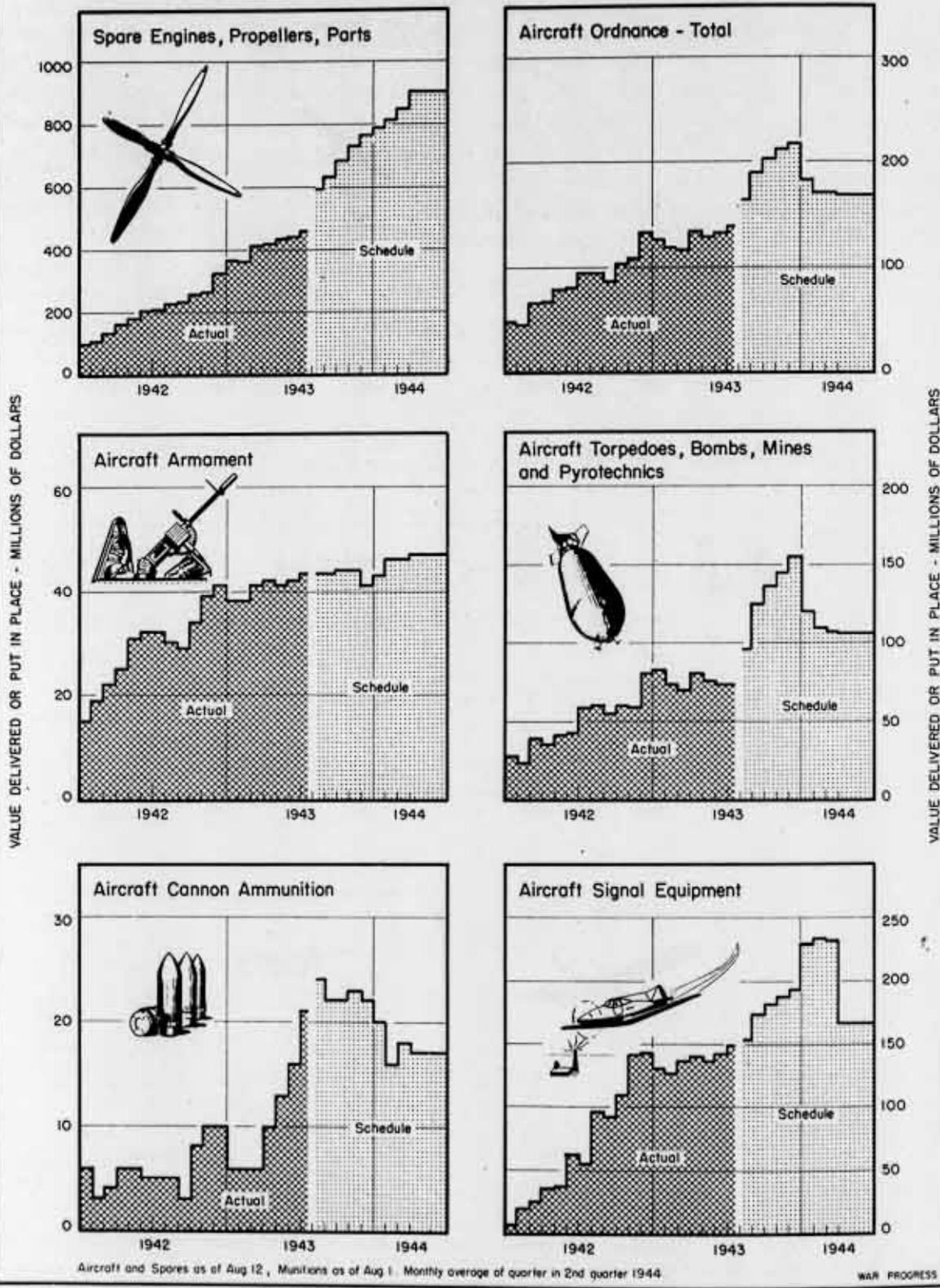


Aircraft and Spares as of Aug. 12, Munitions as of Aug. 1. Monthly average of quarter in 2nd quarter 1944.

WAR PROGRESS

PRODUCTION PROGRESS

Aircraft and Aircraft Munitions (continued)



The President

WAR PROGRESS

Confidential
(British Secret)

DECLASSIFIED
E.O. 13526, 13527, and 13529 of 03
Compliance Dept. Letter 11-18-78
By RHP/DAA

MAR 13 1973

Closing in on Inventories

Tanks—A Pattern for Conversion

Death to Staphylococci

Number 157

September 18, 1943

Inventories Are Where You Find Them

Share-the-surplus drives in steel and valves far exceed expectations, and techniques for redistributing idle stocks will extend to other materials and components.

THE SHARE-THE-STEEL drive is pretty much history—but successful history. Launched July 1 to uncover 500,000 tons in the third quarter, the drive—in two months' time—not only released 760,000 tons for the third quarter, but also it brought in 210,000 tons for the fourth quarter.

One week after the share-the-steel drive started, War Production Board's Redistribution Division launched a not-so-well-publicized share-the-valve drive. And it is still going on. Claimant agencies are still busy redistributing the 100,000 steel valves released from inventories—other steps are being taken to redistribute 25,000 brass, bronze, and iron valves. And the campaign's goal was 15,000 steel valves—two days' production instead of two weeks'!

DREAM COMES THROUGH PLUS

In both instances, actual accomplishments far exceeded original expectations, suggesting that perhaps current conceptions of the size of inventories are too modest. And as a result, the share-the-steel and share-the-valve techniques are to be applied to other materials (possibly aluminum and copper) and other components (possibly bearings and motors) wherever feasible. Immediate objective is to break bottlenecks in major munitions programs by moving idle inventories into waiting end products.

What happened in steel was this: The War Production Board sent field men

into 3,500 plants. Their visits were preceded by publicity and by telegrams signed by Charles E. Wilson. And the plants were asked to fill out forms specifying:

1. Current steel inventory
2. Rate of steel use
3. Current orders at steel mills or allotments against which orders were still to be placed.

On the basis of these data, steel consumers as well as WPB's Steel Division could determine whether orders already on the books of steel mills could be canceled or allotments could be returned to claimant agencies. Of the 970,000 tons released, 30% represented cancellations of orders. The benefits of the drive did not end there. Steel consumers are still canceling orders or not using allotments and claimant agencies are encouraging them to do so.

The idea of the share-the-valve drive is the same as in steel: to utilize

COMEBACK AT LOCKLAND

WRIGHT Aeronautical plant at Lockland, Ohio, staged a comeback in August, shipping more than 1,000 R-2600B 14-cylinder, 1,700hp engines. This was four times the July low (WP-Aug28'43,p5) and the best showing since April. However, the schedule called for more than 2,000, so production still falls far short of the mark. This month's schedule totals 2,700. A factor in the August showing may have been shipments of motors which were built a few months ago but which were not then accepted.

existing inventories more efficiently. But the technique is basically different. In steel, the job was to get cancellations of orders at the mill level; to get steel users to draw down on their inventories, and thus cut down future deliveries of steel to them. The steel thus renounced became available to other consumers. Thus, in sharing the steel, finding the surplus was just about 99% of the problem. In sharing the valves, the problem just begins when the surplus is discovered. Valve-sharing calls for physical transfer. Users of valves pass on their surpluses to a claimant agency or to another manufacturer.

JURISDICTIONAL PROBLEMS

The whole procedure involves highly technical jurisdictional questions. For example, claimant agencies wanted to be sure that shifting of valves from one manufacturer to another would not prejudice their overall programs. To this end, WPB agreed that each claimant would be entitled to redistribute valves within its own program. Thus, if one navy shipyard had a surplus of valves, the Navy would be permitted to distribute those valves first among other of its shipyards before sharing them, say,

with the Maritime Commission yards.

WPB and the Metals Reserve Company had to work out a plan for purchasing surplus valves, transferring them, and defraying extra freight and other costs of the program with due regard to the conflicting jurisdictions of WPB, Metals Reserve, and the various claimant agencies. To this end, the Murray Cook agency, which handled the intricate details of the manila hemp redistribution program, was brought in as intermediary by Metals Reserve. How complex are the legal ramifications is suggested by the fact that in some cases, Metals Reserve (through Cook) can pay the freight; in other cases, the claimant agency must do it; and in still other cases, it's up to the private companies.

The share-the-valve drive was directed at steel valves, but it brought in brass, bronze, and other valves as well. The immediate effect was to expedite construction of rubber and high-octane plants and naval and merchant ships.

9,000 QUESTIONNAIRES

To locate these valves, WPB sent out more than 9,000 questionnaires, which call for data on size, type, and name of the valve manufacturer. Next WPB tabulates these returns by type, size, and holder. Then, the complete list is sent to each claimant agency, which can—by inspecting the list—find out which of its contractors and subcontractors has a surplus that can be used by some other of its contractors. (Claimant agencies try to keep a file of the critical-component needs of major contractors; this file would cover valves.) Each claimant agency then notifies the WPB of the valves within its own jurisdiction that it is redistributing, so that they can be stricken from the surplus list. And valve manufacturers are

IN THIS ISSUE:

INVENTORIES ARE WHERE YOU FIND THEM . . .	1
COMEBACK AT LOCKLAND	1
KEY STATISTICS OF THE WEEK	4
STAPHYLOCOCCI KILLER	5
SHAPE OF CONVERSION TO COME	7
MORE OIL TO EAST COAST	9
RELIEF FROM RELIEF	10
WAR PROGRESS NOTES	10
COST OF LIVING—ON THE WAY BACK?	11
SELECTED MONTHLY STATISTICS	12
REPORTS ON REPORTS	13
PRODUCTION PROGRESS (GROUND ARMY MUNITIONS, WAR CONSTRUCTION)	14-16

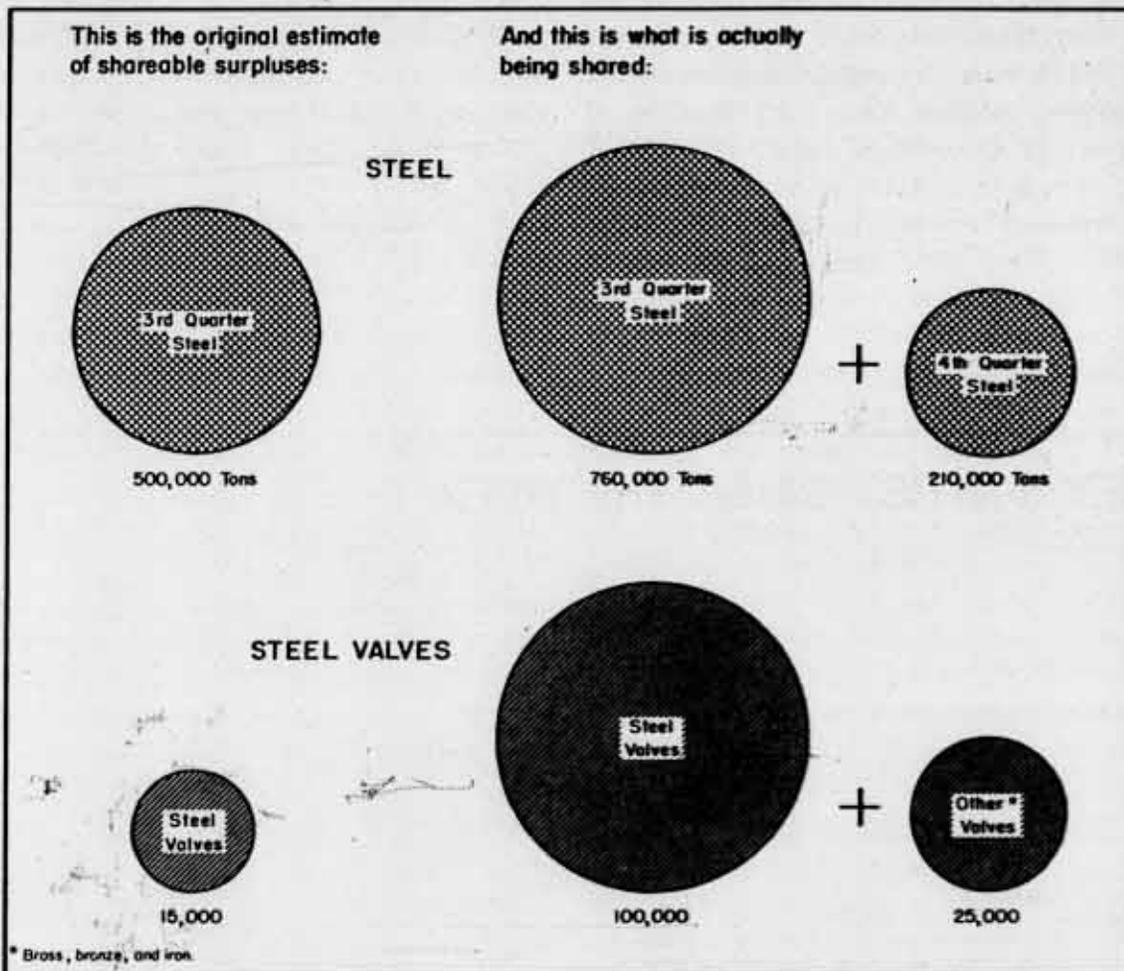
then advised to cancel the orders being filled by the redistribution.

At the same time, each valve manufacturer gets a list containing all surplus valves of his make—Walworth gets a listing of Walworth valves; Crane

of Crane valves, etc. This makes it possible for the Walworth Company, say, to buy back its valves from Company A and ship them to company B; or to tell company B that company A has a surplus of the type of valves A wants. Often

YOU NEVER CAN TELL TILL YOU TRY

Success of share-the-surplus drives in steel and steel valves far exceeded original expectations.



WHEN the Steel Division first conceived its share-the-steel drive, it was hoped that as much as 500,000 tons might be "saved" through cancellation of orders or voluntary cuts in allotments. But the figure was regarded as decidedly optimistic. When the Redistribution Division proposed the share-the-valve drive,

many claimants objected that valve inventories were tight. Hence, the goal of 15,000 was regarded as on the high side. In both cases, however, as the chart shows, achievements exceeded expectations by a wide margin. This disparity suggests that inventory surpluses generally may be underestimated.

this is done with a "replacement privilege": Walworth agrees to ship A the surrendered valves by a specified date. However, at present Walworth can only shift valves among manufacturers of a given claimant agency. It cannot transfer Maritime Commission valves from a maritime shipyard to an army contractor, or vice versa.

To date, the share-the-valve program has not gone beyond the share-the-valve-within-the-claimant-agency stage. Claimant agencies and valve manufacturers are still busy trying to redistribute surpluses within the jurisdiction of respective claimants. The next stage will be when claimants release valves for general redistribution within a few weeks. Thus far, only the Bureau of Ships has released its surplus to others.

The share-the-steel and share-the-valve programs cut two ways. For ex-

ample, when WPB field men visited steel consumers, sometimes they discovered that a company with, say, a surplus of 10,000 tons of various types of carbon steel was desperately in need of 500 tons of a particular shape. And they were able to arrange for putting the company's needs on an early melt schedule. Thus, in effect, you not only share your surplus, but also your deficit.

PROFITIOUS TIMING

Timing of the two initial drives was particularly propitious. They came when many munitions programs had been cut back so that some manufacturers would have surpluses. Favorable war news encouraged lightening up of inventories. The checkups reminded manufacturers of the CMP 60-day inventory limitation, which has been adhered to rather loosely. The Army publicly announced

KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program- Checks paid (millions of dollars) -----	1,605	1,731	1,669	1,771	1,123
War bond sales (millions of dollars) -----	178	208	198	239	151
Wholesale prices (1926=100)					
All commodities -----	102.8 ^p	102.5 ^p	102.7 ^p	103.2	99.2
Farm products -----	123.2	123.3	122.9	123.5	107.2
Foods -----	104.8	104.7	105.1	107.0	101.6
All other than farm products and foods -----	97.4 ^p	97.3 ^p	97.3 ^p	96.6	95.7
Petroleum:					
Total carloadings -----	55,571	57,084	56,661	50,364	54,455 ^a
Movement of cars into the East -----	27,167	28,031	29,418	25,832	27,495
East coast stocks for civilian use (1940-41=100 Seas. Adj.) -----	41.9	40.3	34.5	29.9	60.1
Total stocks of residual fuel oil (thousands of barrels) -----	67,011	67,675	66,448	68,243	79,019
Bituminous Coal:					
Production (thousands of short tons, daily average) -----	2,008	2,022	1,967	2,058	1,909
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports -----	2,678	2,843	2,665	1,440	1,664
Gulf Coast ports -----	340	360	345	351	224
Pacific Coast ports -----	1,438	1,370	1,410	970	653
Unused steel capacity (% operations below capacity) -----	0.4%	-0.3%	1.8%	0.7%	2.8%
Department store sales (% change from a year ago) -----	+10%	+1%	+4%	+3%	-3%

p. preliminary r. revised

that in canceling contracts it would not be responsible for more than 60-days' inventory.

Both the share-the-steel and share-the-valve drives are a beginning and not an end. The procedures and techniques will be used both intensively and extensively throughout the economy as a means of taking idle man-hours off inventory shelves.

Staphylococci Killer

Production of penicillin is slated to rise 63 times current output. Wonder drug of World War 2 is proving more effective than sulfas against some infections.

PENICILLIN—accent on the SILL—is putting in a bid for the title of Wonder Drug of World War 2. Developed since 1939, it has already proved more effective than the sulfa drugs in fighting off staphylococci bacteria wound infections; and in some cases of streptococcus infections—the better known but less common battlefield diseases—penicillin also works better than the sulfa.

BLOOD POISONERS

Staph microbes (pus formers) are blood poisoners, often necessitating amputation of limbs and even causing death. Sometimes staph infections resist treatment, keep wounds open and raw for years. But penicillin promises to heal these, and also the bone-destroying osteomyelitis, strep meningitis, sulfa-resistant pneumonia and gonorrhea, and that scourge of the battle wounded—gangrene.

Like the sulfas, penicillin slows up and stops the reproduction of bacteria so that the white blood cells can move in and overpower the enemy; to do this in a case of sulfa-resistant gon-

orrhoea takes about 100,000 units, osteomyelitis 2,500,000, a unit being an arbitrary measure of the drug's bacteria inhibiting power.

Current monthly production, running to 2,300,000,000 units—enough to treat about 900 osteomyelitis cases—is far from adequate. But a \$5,300,000 facilities program, directed by the War Production Board Chemicals Division and aided by Army and Navy expeditors and AA-1 preference ratings, is being pushed to overcome production difficulties and boost monthly output to 11,850,000,000 units in January and a peak of 146,000,000,000 by July, 1944. This ultimately would be nearly 200 times the output of July, 1943, and 63 times current output (chart, page 6).

COSTLIER THAN SULFAS

Penicillin, at \$18 per 100,000 units, is about six times as costly as the sulfas; but once it works out of the new-drug class and into mass production, cost should be cut—one-half by early 1944, and more thereafter.

Output is now allocated as follows: 50% for the Army; 15% to the Navy; 2% to U.S. Public Health Service—for treating Coast Guard personnel and merchant seamen; 19% to the Office of Scientific Research and Development—for chemical and clinical research and meeting civilian appeals; 0.1% to the Federal Food and Drug Administration for analysis.

TEST-TUBE TEMPERAMENT

And about 12% is turned back to pharmaceutical laboratories—to discover easier and better ways of production. For chemists still have much to learn about penicillin production. Penicillin comes from a low form of vegetable life—a mold (*penicillium notatum*) with a test-tube temperament. It must have sterile surroundings. And it does best

when pampered with a culture specially made of lactose, bran, or whey powder. After a week, the mold secretes a clear liquid from which penicillin is extracted and processed into its commercial form—a fluffy yellowish powder. But often the mold doesn't cooperate; it just won't yield any penicillin. Chemists are still trying to find the reason.

NEEDS CRITICAL MATERIALS

Penicillin production demands plenty of equipment—refrigeration machinery, steel centrifuges, storage tanks, vacuum pumps, and special packaging equipment for sterile filling, sealing, and labeling the glass ampules into which the finished product goes.

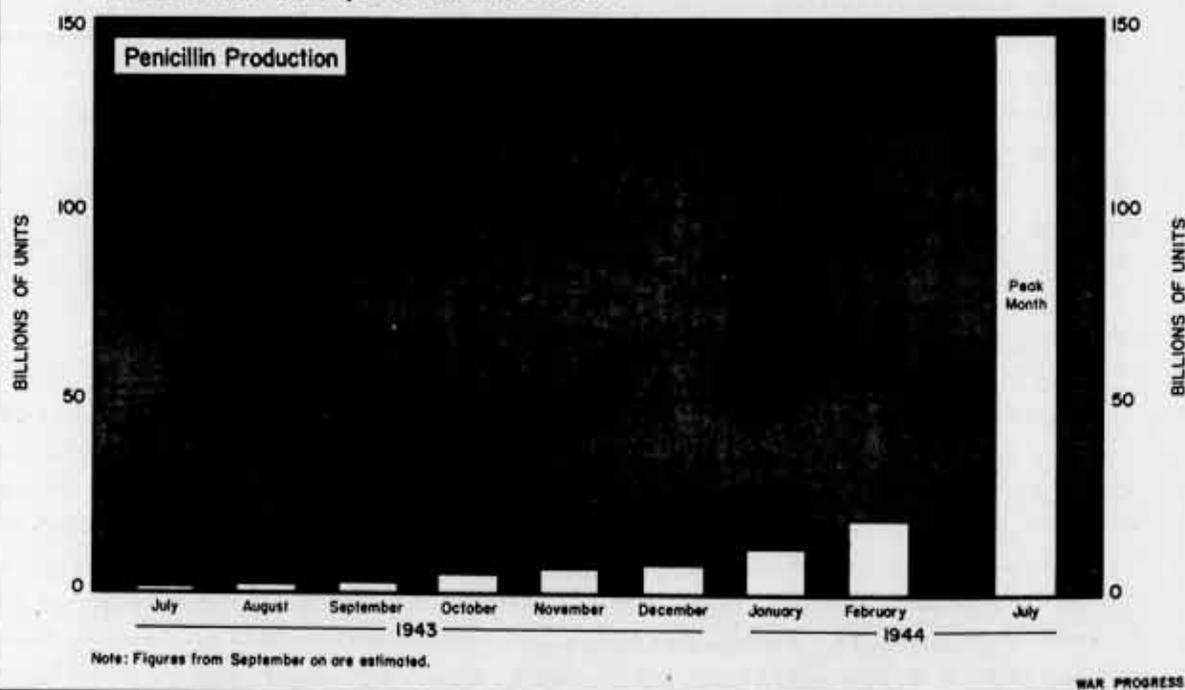
The penicillin program is being forced. Chemists are laboring and doctors are trying to do in one month what they would ordinarily do in six. And plans for facilities are constantly being al-

tered—it's like design changes in airplanes. For example, at present 60% of penicillin is produced from mold strains grown in one-liter glass bottles, the rest in glass-lined and stainless steel tanks. The use of 100-gallon tanks is a recent development, but it had hardly proved workable when the size was increased, to 1,000 gallons. Use of the larger vessels, however, was not always successful; sometimes batches spoiled. But laboratories expect to lick this bug; they're already thinking of 10,000-gallon vessels. They are also considering using rotating cylinders as well as tanks. Moreover, chemists are seeking to synthesize the drug—to by-pass the temperamental mold—but progress has been necessarily slow. In the meantime, the blueprints for facilities are always in a state of flux.

Penicillin was first developed at Oxford University, England, in 1939 by

THE RISING TIDE AGAINST STAPHYLOCOCCI

Production of penicillin, enemy of pus-forming microbes, is destined to rise 63 times current levels; is battlefield savior.



Dr. Howard Florey. But Britain at war lacked the facilities for producing it on a large scale. In 1941, the Office of Scientific Research and Development started to pave the way for the drug's chemical and clinical progress; the Department of Agriculture experimented with new strains of mold, produced one

that gave a much higher yield of drug. A few pharmaceutical houses went to work growing the mold and extracting the drug; civilian doctors worked out dosages, methods of administering; and a year ago penicillin went out to 22 selected hospitals for its clinical trials. Final result: the WPB expansion program.

Shape of Conversion to Come

Tank cutback leads first to reductions in manufacturers' schedules, then to outright contract cancellations. Vacated plants turn to planes, locomotives, etc.

TANK AND TANK DESTROYER schedules have been cut again. New production forecasts for 1944 call for one-quarter fewer tanks and self-propelled guns on tank chassis than were scheduled as of June.

From a peak monthly average of 3,700 in the second quarter of this year, the combined programs have already dropped to 3,100 this month. They head on downward to fewer than 2,100 a month in the second half of 1944. Year by year, output now looks like this:

	S.P. on Tank		
	Tanks	Chassis	Total
1942..	25,400	3,000	28,400
1943..	30,800	9,400	40,200
1944..	19,600	6,900	26,500

Yet, only three months ago scheduled output was set up as follows:

	S.P. on Tank		
	Tanks	Chassis	Total
1943..	33,000	10,100	43,100
1944..	28,500	7,300	35,800

And the cutbacks between June 1 and September 1 shape up like this:

	S.P. on Tank		
	Tanks	Chassis	Total
1943.....	7%	7%	7%
1944.....	31	5	26

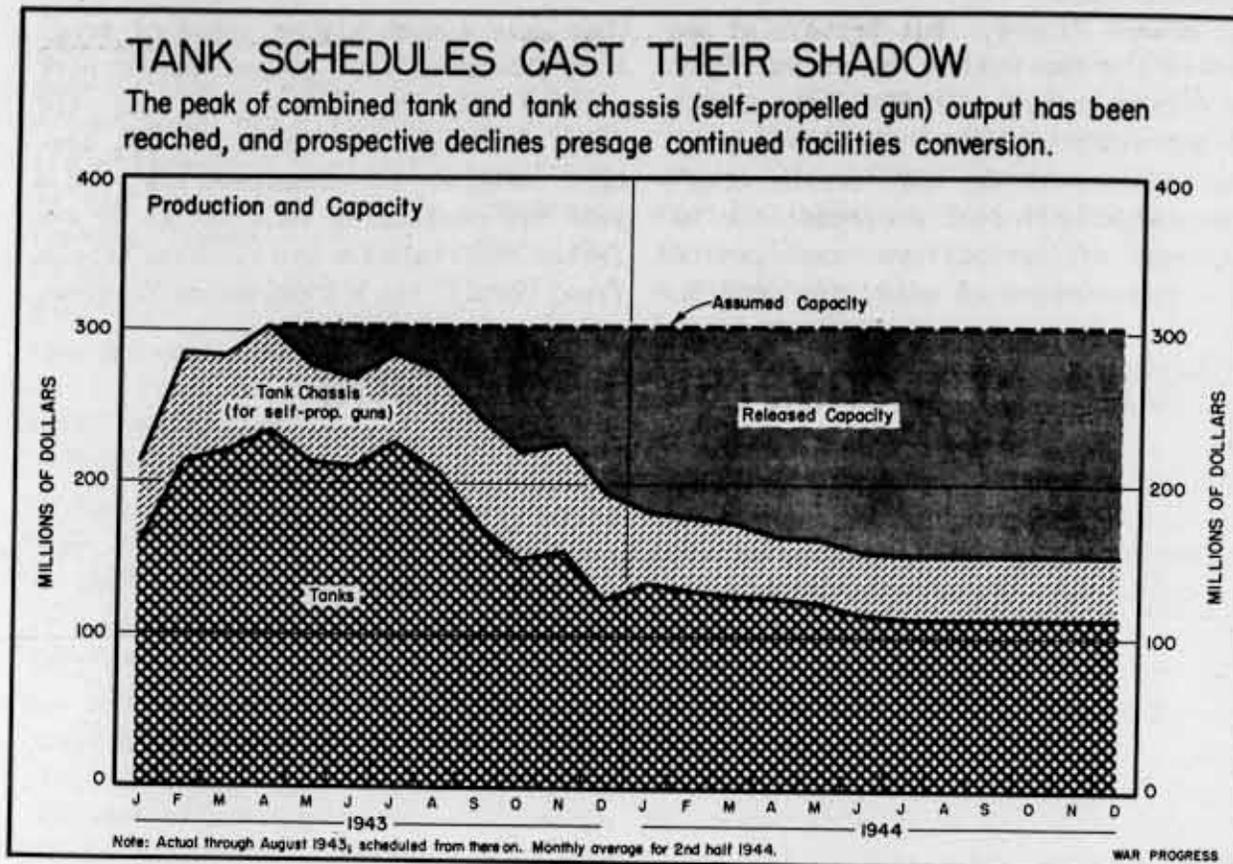
The new program is modest compared to ideas after Pearl Harbor. Then a goal of 100,000 tanks and tank chassis was set for 1943, and an ambitious program of tank facilities was started. By early summer, however, requirements for 1943 and 1944 together were cut to 84,300 tanks and S.P. guns on tank chassis—and about half were for international aid. Since then, the two-year requirements of foreign governments have been trimmed about one-fifth; our own have been reduced about the same. And the two-year program is now down to 67,300, so there's tank-chassis capacity to spare.

CAPACITY ABUNDANT

How much to spare is suggested by these facts:

1. Peak production of tanks and self-propelled guns on tank chassis averaged \$283,000,000 per month during the second quarter of this year.
2. In the second half of 1944 production is scheduled to average about \$154,000,000 a month.
3. Thus, by next summer, released capacity may be as great as \$129,000,000 a month.

Re-use of tank facilities eventually



will cover a wide range of industrial products. As a starter, manufacturers of tank transmissions will divert to trucks and tractor work and to aircraft engines. Tank engine manufacturers will turn to aircraft engines particularly. Tank assembly plants will go to locomotives for the Army, to aircraft, etc. Tank engine production will be concentrated in General Motors, Ford, and Continental.

HORIZONTAL TO VERTICAL

Not all of the released capacity will be used—obviously special equipment and tools, for the most part, will be good for tanks only.

Heretofore, most contract slimming has been applied horizontally—that is, the tank manufacturers merely had their orders reduced. This fits in with Army policy: to maintain "standby facilities"—just in case. Moreover, there has

been natural opposition to cuts from industry, labor, and local chambers of commerce, let alone outright contract cancellations. But so large is the overall decline that now some plants are being cut right out of the program.

The reduction in medium tanks and chassis schedules is drastic—from 30,500 this year to 19,200 in 1944. The M4 tank accounts for most of this decline; it falls off 41%. Incidentally, an M4 mounting a 105mm. howitzer instead of a 75mm. gun accounts for 2,000 of next year's 13,000 total. Medium tank chassis for self-propelled guns fall off 27%. The 25-pounder and 3-inch models go out; the 105mm. howitzer and the new 76mm. gun make up the 5,900 medium S.P. total.

Ten companies have been assembling medium chassis for tanks and S.P. guns. Under the reduced schedule, Chrysler facilities alone could do the job as

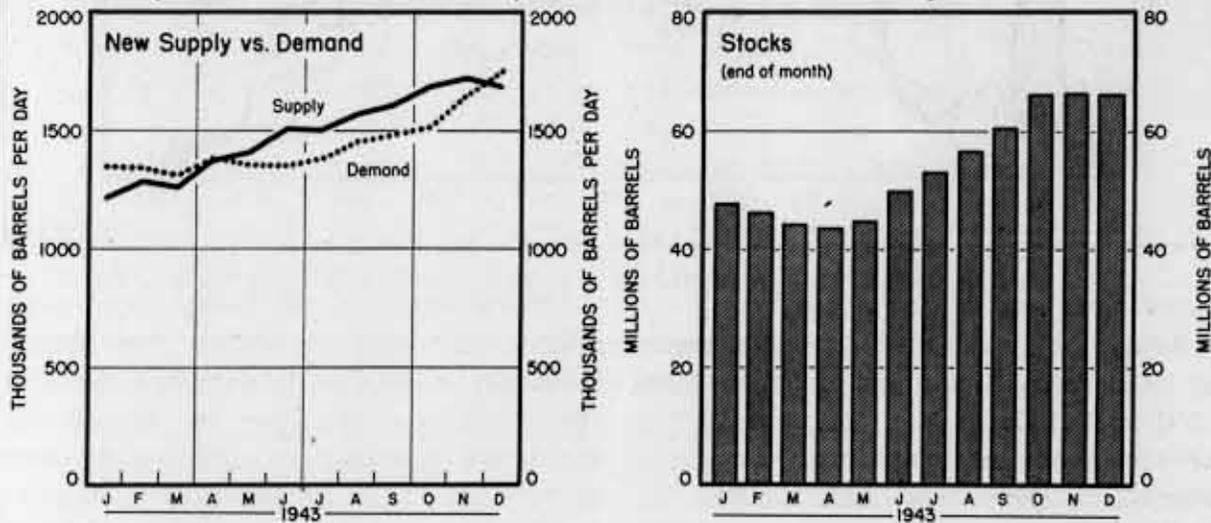
scheduled for 1944. But the Army likes some spare operations capacity, so Fisher and Chrysler will probably stay in the medium tank business, plus Pressed Steel Car Company. The remaining seven cease tank production between now and the end of this year.

Baldwin Locomotive will produce tank recovery vehicles and locomotives. American Locomotive will go back to locomotives and hoisting equipment, as soon

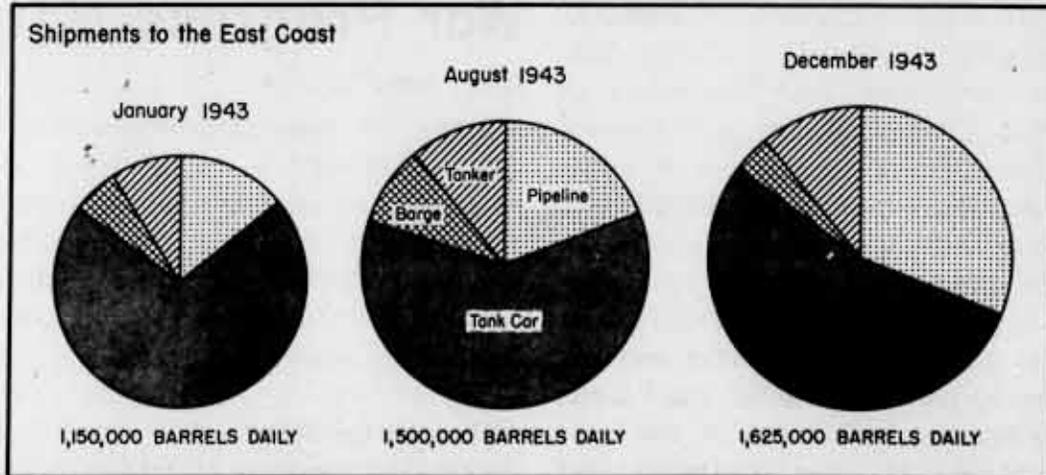
as it winds up its tank program, but will produce some self-propelled mounts in 1944. Lima Locomotive will return to locomotive, crane, and shovel manufacture. Ford will be out of tank assembly and the released capacity will be available for its other programs. Surplus capacity of Pullman-Standard is likely to be used for an aluminum extrusion plant. New programs for Pacific Car and Foundry and Federal Machine and

MORE OIL TO THE EAST COAST

New supply of petroleum and products has been running ahead of demand; as a result, stocks in December are expected to be 27% ahead of last year.



Big factor is the pipeline. Though tank cars carry most of the oil, the piped proportion is expected to rise to 31% this December from 14% last January.

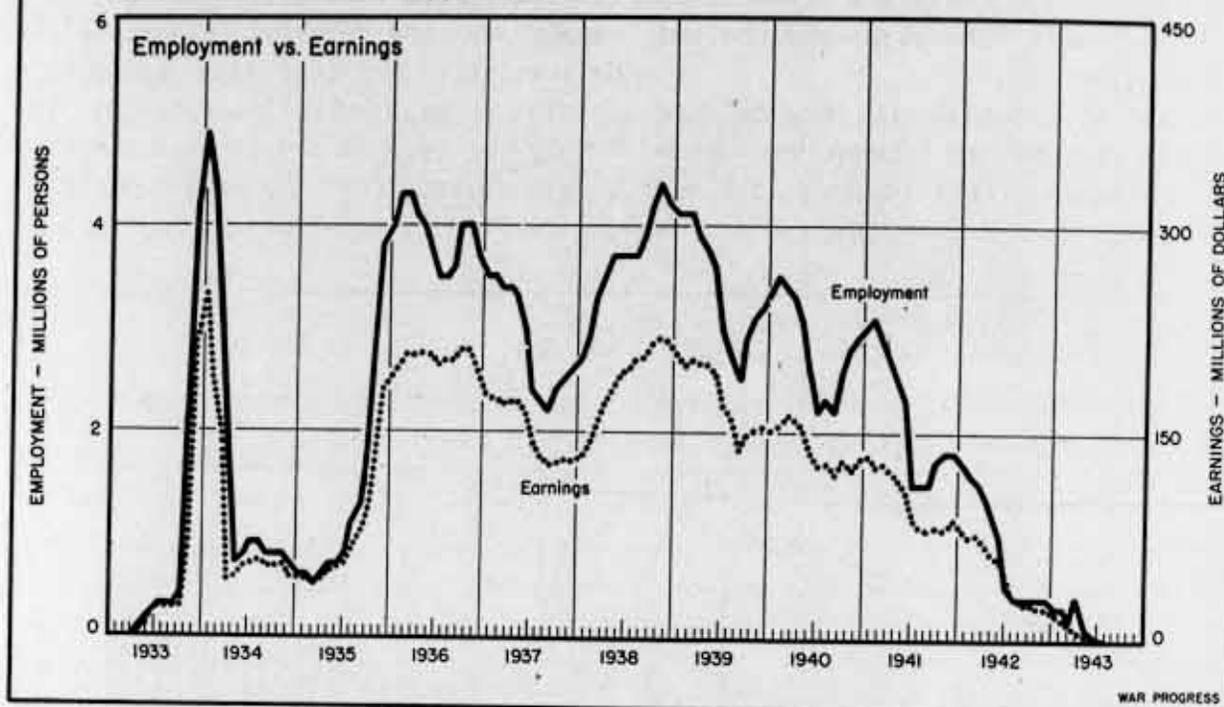


Note: Figures from September on are estimated.

WAR PROGRESS

RELIEF FROM RELIEF

A decade of federal job-making (1933-1943) has come to an end. In July, government work-relief rolls dropped to zero.



Welder have not yet been set.

Scheduled production of light tanks and chassis falls off 25% in 1944—from 9,700 to 7,300. Except for some 7½-ton airborne tanks left over from this year's program, production will be limited to: (1) the 15½-ton M5 tank mounting a 37mm. cannon, output of which rises from 3,900 this year to 6,200 next; (2) the 75mm. howitzer on a light tank chassis, output of which falls from 1,330 to 950.

There have been four companies in this field. American Car and Foundry may use part of its facilities on tanks and mounts, part in the manufacture of tractors or heavy trucks. Massey-Harris will continue to produce light tank chassis. Cadillac will remain in M5 tanks and light self-propelled mounts. Marmon-Herrington, maker of the 7½-ton airborne job, may be cut out of the program sometime next year, probably converting to aircraft.

There will be no heavy model next year under current plans. The 60-ton M6 tank, made by Baldwin and costing \$220,000, has not been in demand for strategic reasons. It is slated to wind up production in December with 40 produced. Back in February, 1942, we talked about 500 of these for this year.

War Progress Notes

EXIT: WORK RELIEF

THE ERA of Federal work programs that began with CCC in 1933, ended in June of this year when WPA and NYA went out of business. In all 10½ years of "making work" Uncle Sam paid out about \$15,000,000,000 in wages. Today in two months war expenditures amount to that much.

During the first six months of 1943, work-relief payments totaled \$50,000,000—only one-eighth the amount paid

out in the first half of 1942, and 1-20th of the peak \$1,250,000,000 rate in the second half of 1938. In May, 1943, some 95,000 persons still were employed on Federal work programs, more than 90% of them NYA students.

At the time of Pearl Harbor the number on the rolls was 1,500,000, of whom less than 20% were students. As the chart on page 10 shows, the work-relief peaks occurred in January, 1934 (the CWA period) when almost 5,000,000 were thus employed, and November, 1938 (the highest point of WPA), when all Federal work programs employed about 4,500,000. (In all, 8,500,000 persons were on WPA rolls at one time or another; with their families this constituted about one-fifth of the nation dependent on work-relief.)

JUNGLE NOTE

WHEN an army flyer parachutes to an emergency landing in the South Pacific

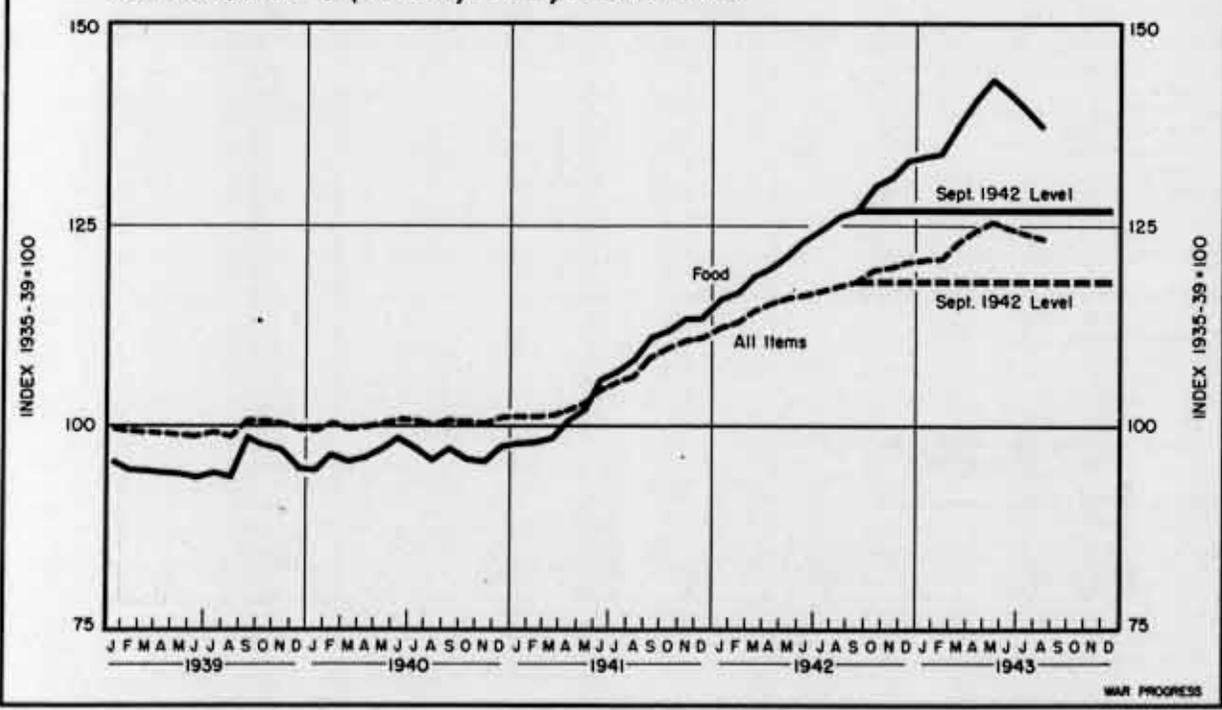
a "jungle kit"—built into the parachute—goes with him. Aside from a machete, compass, jackknife, condensed field ration, fishing line and hooks, gloves, hatchet, matches, and first aid supplies, each kit has a booklet entitled, "How to Live in the Jungle." Women workers of the Army Service Command—which distributes the packet—often enclose notes, which are an immediate fill-in for a letter from home.

MORE OIL FLOWING EAST

BY November this year, the total new supply of petroleum for the East Coast is expected to reach a wartime peak of more than 1,700,000 barrels daily—43% higher than a year ago. The chief factor in this rise will be the now-functioning 24-inch (Big Inch) pipeline and a soon-to-be-opened, parallel 20-inch line (chart, page 9). But whether civilians will benefit remains a question;

COST OF LIVING—ON THE WAY BACK?

For three months now, the index shows a drop; but it still has a long way to go towards OPA's September, 1942, rollback level.



the big "if" is military demand.

Since April, East Coast inventories have been expanding, from a 32 days' supply to a 40 days'. A favorable ratio is expected to continue until December, when demand for heating fuel normally reaches a peak. And current estimates are that year-end stocks will be 27% higher than in December, 1942—some 66,000,000 barrels against 52,000,000.

ON THE ROLLBACK ROAD

FOR THE third consecutive month, the Bureau of Labor Statistics reports a drop in living costs. The August index, at 123.2, is 0.5% lower than in July. Chiefly responsible are the rollbacks in butter and meat prices, plus the seasonal decline in fresh vegetable prices. From January, 1941, (the month of the "Little Steel" formula) to May, 1943, the index rose an average of nearly 1% per month, to 125.1—highest since

1927. Since May it has declined an average of 0.5% monthly. Both on the incline and decline the movement of food prices has been dominant (chart, page 11). The Office of Price Administration has now gone about one-fourth of the way necessary to roll prices back to the September, 1942, level. To finish the job, the index will have to drop 4.4% (5.6 points). The food index, however, still has to drop 7.7% (or 10.6 points). It has already gone slightly more than one-third on the rollback road.

COUNTER-TREND EMPLOYMENT

THE machine-tool industry has a different kind of manpower problem these days: It isn't trying to add to its labor force, but is fighting hard to hang onto its men while it goes through the process of retooling a portion of its capacity to handle direct war work. Employers are paying men full time while

SELECTED MONTHLY STATISTICS

Federal Finance - Income Payments - Labor Force - Cost of Living

	Latest Month*	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Same Month 1939	Same Month 1937
FEDERAL FINANCE (GENERAL FUND)							
Expenditures - Total (billion dollars)	7.6	7.1	8.3	6.1	5.2	.8	.6
War	7.2	6.4	7.5	5.8	4.9	.1	-
Nonwar	.4	.7	.8	.3	.3	.7	.6
Revenues - Total	2.7	2.0	4.6	1.0	.6	.4	.5
Income Taxes	1.6	1.3	3.8	.4	.2	.1	.1
Other	1.1	.7	.8	.6	.4	.3	.4
War Bond Sales	.8	.9	.9	.9	.7	-	-
"E"	.7	.7	.7	.6	.5	-	-
"F" and "G"	.1	.2	.2	.3	.2	-	-
Net Debt	137.7	132.9	127.2	108.6	78.5	38.7	34.1
INCOME PAYMENTS - TOTAL (million dollars)							
Salaries and Wages	11,795*	12,161	11,138	10,819	9,671	5,811	6,177
Mfg., mining, agric., constr.	8,413*	8,405	8,245	7,725	6,693	3,667	3,841
Government	6,680*	6,594	6,467	6,077	5,600	3,099	3,322
Military	1,733*	1,809	1,774	1,629	1,048	424	393
Nonmilitary	899*	858	834	740	409	39	36
Other income payments	834*	951	940	889	639	385	357
Income payments, annual rate (adjusted for seasonal, billion dollars)	3,382*	3,756	2,893	3,094	2,978	2,144	2,336
	143.6*	141.9	140.2	132.0	116.1	70.4	74.4
LABOR FORCE - TOTAL (millions)							
Employment	54.9	55.5	54.6	52.3	56.2	n.a.	n.a.
Male	53.9	54.3	53.4	50.9	54.0		
Female	37.0	37.2	36.7	35.9	39.7		
Unemployment	16.9	17.1	16.7	15.0	14.3	n.a.	n.a.
	1.0	1.2	1.2	1.4	2.2	n.a.	n.a.
COST OF LIVING - ALL ITEMS (1935-39 = 100)							
Food	123.2	123.8	124.8	121.0	117.5	98.6	103.7
Food	137.2	139.0	141.9	133.6	126.1	93.5	106.9
Other than food	116.2	116.1	116.1	114.5	113.0	101.2	102.1

* AUGUST; INCOME PAYMENTS, J.L.V. P. PRELIMINARY. N.A., NOT AVAILABLE.

CONFIDENTIAL

they are idle, are accused of "hoarding" labor.

Even so, the industry's employment has dropped from a December high of 120,000 to 102,800 today, about 14%. And the average work-week has declined from 53.8 hours to 50.3. However, the turnover rate has been reduced, ranging from 3.64 to 5.31 per 100 employees during the first six months of 1943, as against 4.67 to 6.60 during the last six months of 1942.

LESS DEMAND FOR MINERS

THE SUPPLY-DEMAND situation in numerous nonferrous metals is loosening. Vanadium, mercury (WP-Sep11'43,p11), and aluminum (WP-Sep4'43,p1) are now much easier. This means that labor shortages in mines are not so acute as they were about a month ago when the Army, for the second time, furloughed men to go to work in copper, zinc, and molybdenum properties. Molybdenum, partly because of a decrease in electric furnace alloy steel production, also has been somewhat easier of late. But since 75% of the nation's production comes from one mine—Climax in Colorado—this property is still on the urgent list.

PISTON RING 'RITHMETIC

IN THE TIME it takes to machine a piston ring for an aircraft motor, the average operator can turn out anywhere from 10 to 14 piston rings for truck-engine use. Explanation: the closer tolerance required for aircraft piston rings.

REPORTS ON REPORTS

Airplane Labor

Labor Market Problems in the Airframe Industry (confidential; pp. 55) outlines the industry's efforts to cope with absenteeism and turnover, recruitment of new workers, and the shortage of engineering and supervisory person-

nel. The report makes specific recommendations, particularly for handling problems resulting from the large proportion of women employed.

(War Manpower Commission, Bureau of Program Requirements)

How War News Hits Home

A large majority of Americans think they get an adequate quantity and quality of war news, according to *Attitudes toward War News and Navy Informational Policy* (restricted; pp. 17). Based on a nationwide sample of 4,219 persons, the report finds that (1) nearly two-thirds of those questioned recognize the danger of issuing complete news, (2) the Navy's delay in reporting losses causes it to be criticized more than the Army for its informational policies, and (3) the percentage of those regarding available news with skepticism has increased from 28% to 39% since July, 1942. (Office of War Information, Bureau of Special Services)

Coffee, Tea, and Spices

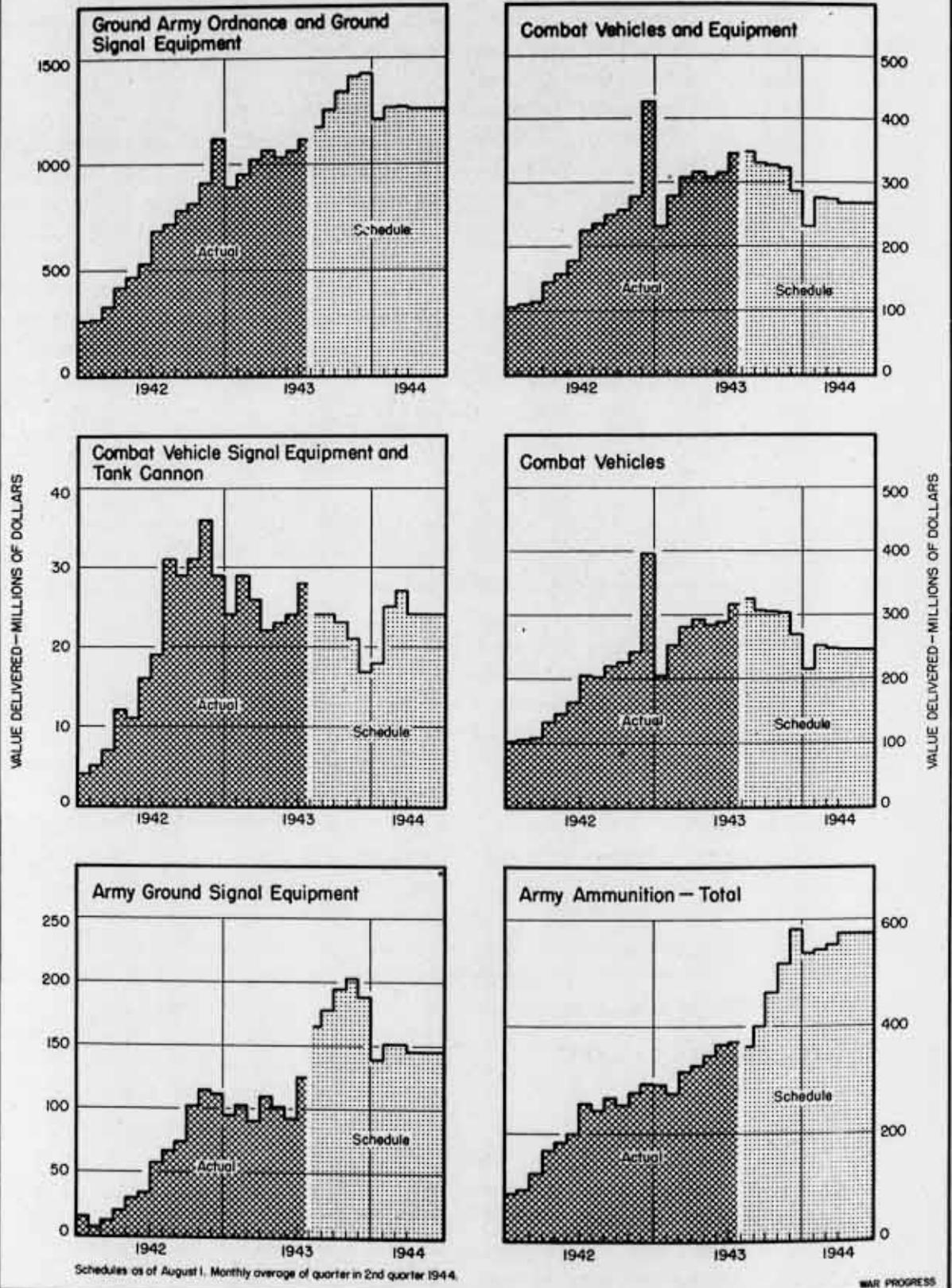
The Inter-American Coffee Agreement has helped coffee-producing countries in Latin America to maintain economic stability during war dislocations, and some form of it should continue through postwar readjustment, according to *Coffee, Tea, and Spices* (confidential; pp. 14). Coffee supplies in the United States are reported as ample; loss of tea supplies from the East Indies has been offset by increased imports from Ceylon and British India; spice imports are considerably below normal.

(Department of Commerce, Bureau of Foreign and Domestic Commerce)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

PRODUCTION PROGRESS

Ground Army Munitions

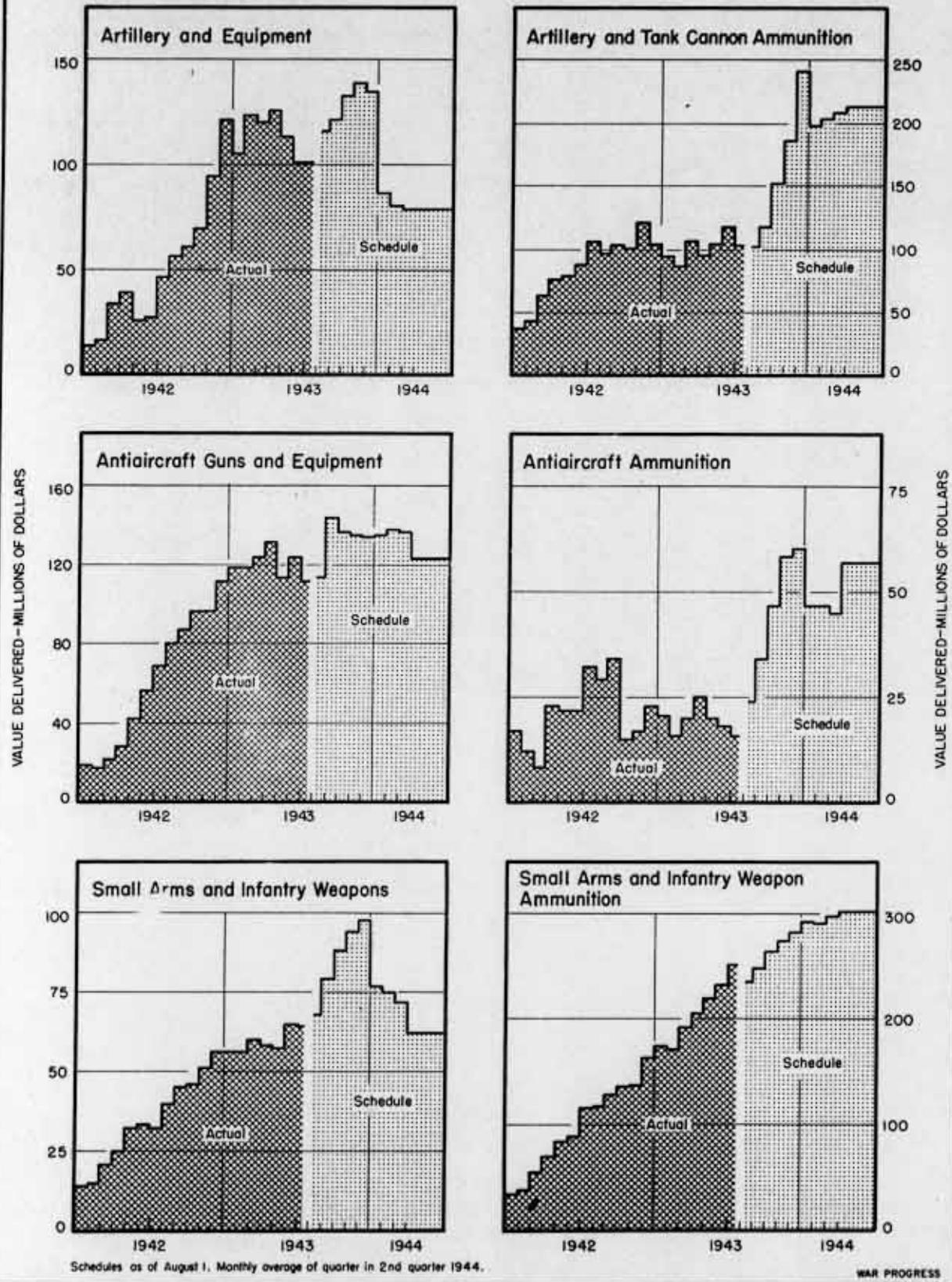


Schedules as of August 1. Monthly average of quarter in 2nd quarter 1944.

WAR PROGRESS

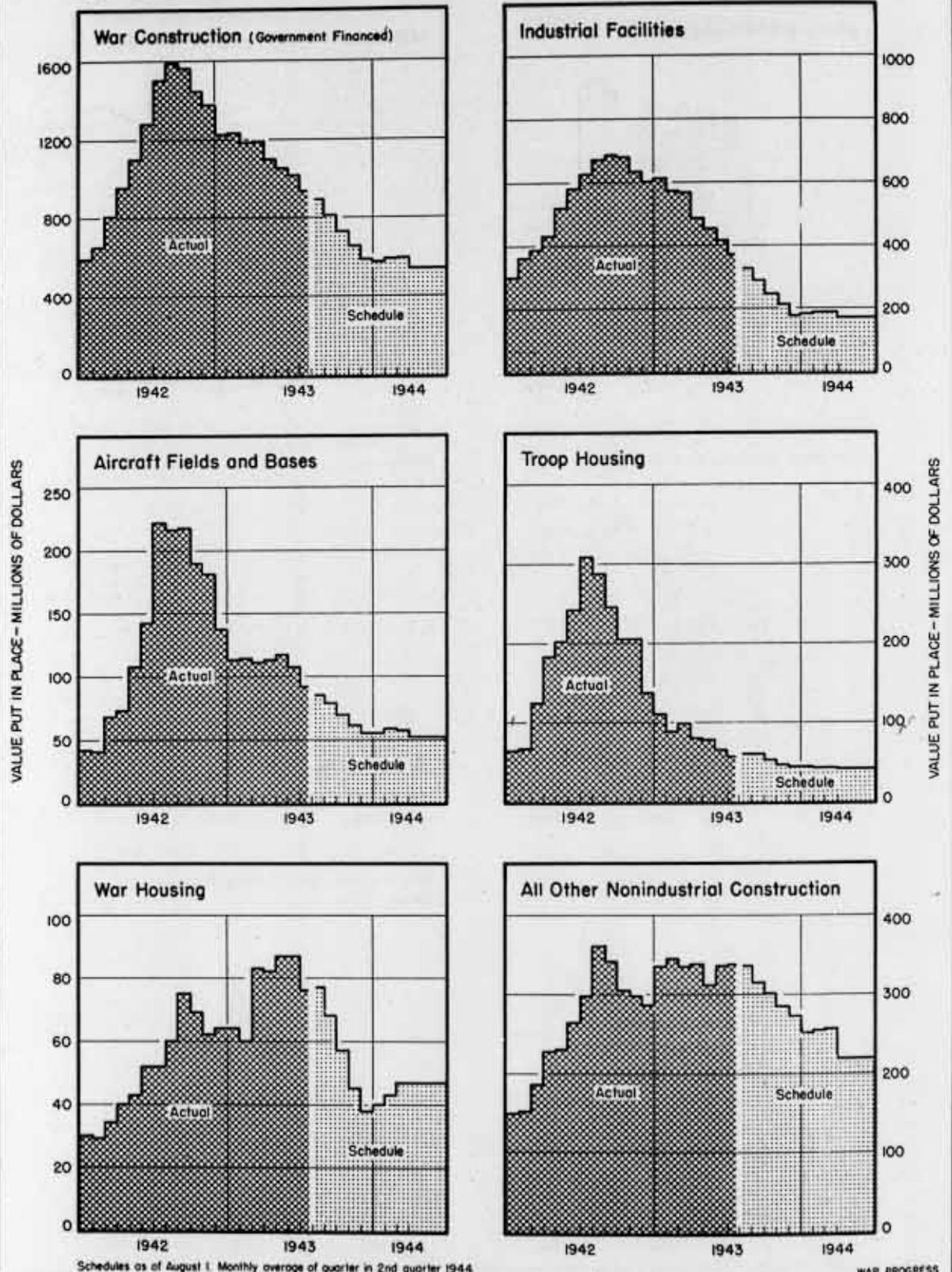
PRODUCTION PROGRESS

Ground Army Munitions (continued)



PRODUCTION PROGRESS

War Construction



The President

WAR PROGRESS

Confidential
(British Secret)

DECLASSIFIED
EO 11652, Sec. 1.05 and 1.07 of (b)
Commerce Dept. Letter, 11-14-73
By BHP, Date MAR 29 1973

Truck Troubles for '44
Alloy Steel into Carbon

Number 158

September 25, 1943

Extra-Heavy Truck Troubles

Army's demand for giant vehicles for overseas duty is rising sharply, but manufacturing facilities are limited. Biggest problem is in engines, axles, transmissions, etc.

AMERICA, believe it or not, is having truck production trouble. In recent months, output of extra-heavy trucks has lagged behind schedule (chart, page 1). And only last week the War Production Board reduced the 1944 requirement from 110,000 to 85,000 vehicles. Reason: The bigger program was not regarded as doable.

That cut of 25,000 trucks comes out of the civilian part of the total. The Army's 1944 requirement (which includes international aid) stays put at 75,000 vehicles. The combined requests of the Office of Defense Transportation, Office of Economic Warfare, Canada, and civil-

ian Lend-Lease were cut back from 35,000 trucks to 10,000.

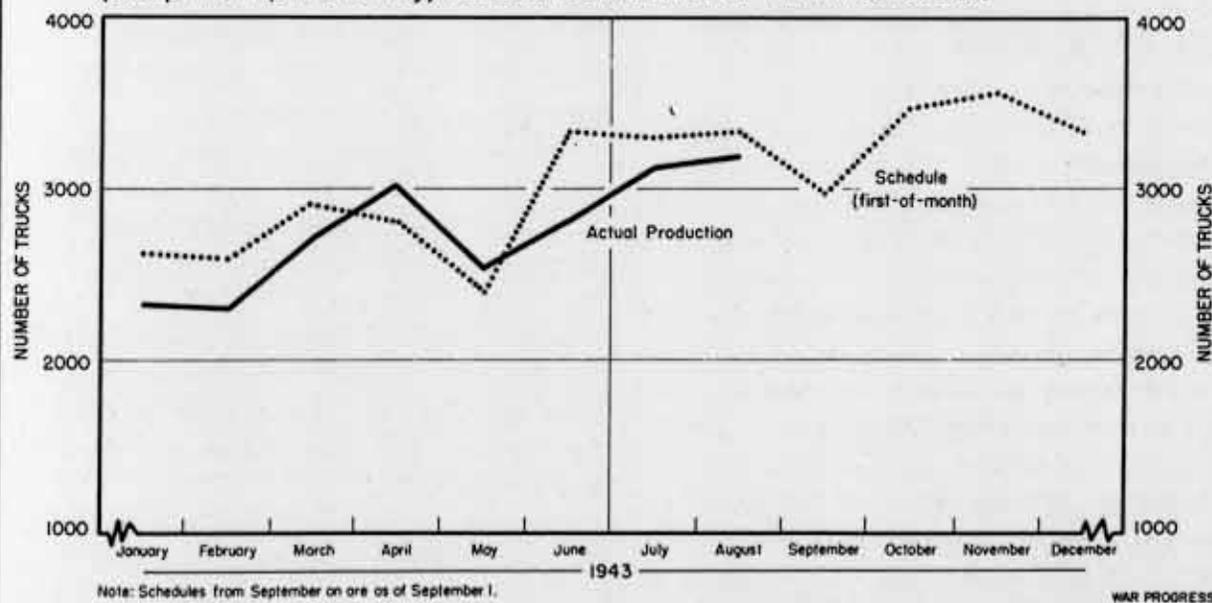
The point is that America, with its multimillion-motor-vehicle capacity, has never needed so many trucks which have either (1) a carrying capacity of 4 tons and more or (2) a gross vehicle weight rating of 25,000 pounds and more.

To the Army, these are just plain "heavy trucks." But to the automobile industry they are "heavy-heavy trucks." That repetition, in itself, suggests that manufacturers never considered them an on-the-shelf production item. They were, to a great extent, custom jobs. In 1941, for instance, only 7,000 of these extra-heavy jobs were made, as against total truck production of 1,000,000. And those 7,000 represented a record high at the time!

Shortly after Pearl Harbor, so com-

EXTRA-HEAVY TRUCK PRODUCTION ...

Follows a familiar munitions pattern. Output so far this year is on the upgrade, but (except for April and May) has been behind first-of-month schedules.



elling was the military need for extra-heavy trucks that 3,000 were withdrawn from a civilian stockpile of 10,000. (Materials to replace these trucks were subsequently made available from the Army's own allotments.) Since that time, virtually the entire production of extra-heavy trucks has gone to the armed services. About 15,000 were made in 1942; more than 40,000 are on the docket for this year. As the Army and Navy grew, so did the need for large vans, cargo vehicles, prime movers, and tractor, wrecker, dump, and general service trucks.

BATTLEFRONT HAULERS

The campaigns in North Africa and Sicily emphasized these needs. Railroads were wrecked or nonexistent. Not only did vast quantities of food, ammunition, and supplies have to be moved by truck, but also artillery and tanks. It takes a 6-ton prime mover to bring up a 90mm. antiaircraft gun, a 7½-ton job to haul an 8-inch howitzer, a 40-ton transporter to carry an M4 tank to the battleline. That's why the Army's 1944 goal for extra-heavy trucks was jacked up to the current level of 75,000 (including 17,000 for international aid).

IN THIS ISSUE:

EXTRA-HEAVY TRUCK TROUBLES	1
20-DAY PLANE TALLY	3
INS AND OUTS IN LABOR	4
OUT OF THE OPEN HEARTH	5
KEY STATISTICS OF THE WEEK	6
THE NAVY GETS THE WARSHIPS	8
U.S. NAVY: 90% GAIN SINCE PEARL HARBOR .	11
WAR PROGRESS NOTES	11
THE BITUMINOUS COAL OUTLOOK	12
SELECTED MONTHLY STATISTICS	13
REPORTS ON REPORTS	13
PRODUCTION PROGRESS (NAVAL AND MERCHANT VESSELS)	14-16

If it were simply a matter of assembling these vehicles, the 1944 goal would not be so formidable. But the problem is in components—engines, axles, transmissions, bearings, etc. The Army and the Automotive Division have already called on WPB's troubleshooting Industrial Facility Committee, and some preliminary steps have been taken.

For example, transmission production at the Clark Equipment Company—largest supplier—is running 4,000 per month below needs. This gap may be filled either by (1) removing machinery (drills, grinders, presses, and gear cutters) from Chevrolet's labor-starved Detroit plant to Borg-Warner at Muncie, Ind., or (2) utilizing the basic transmission manufacturing equipment of Reo's Lansing, Mich., plant, which is not operating at full capacity on gun-mount production.

BOTTLENECK IN PARTS

But the manpower pinch isn't limited to transmissions. It applies to producers of antifriction bearings in the Connecticut Valley, Detroit, and around Canton and Columbus, and to basic parts, such as castings and forgings. The piston ring industry, for instance, is now operating about 30% below (26,000,000 units a month) demand because of a shortage of some 800 foundry workers manufacturing ring castings.

Moreover, gray iron and malleable foundries don't have the capacity to turn out the unprecedented number of large castings that must be made into housings for heavy-duty axles, transmission cases, transfer cases, engine blocks, etc.; and this undercapacity also applies to forging and machining facilities for the large crankshafts and gears.

Meanwhile, as schedules are laid out for the expanded program, one potential

choke-point after another turns up—in springs, brakes, universal joints, piston pins, spark plugs, starters, generators, batteries. Most of the difficulty is being traced right back to the forge shop and the foundry, where the possibilities for employment of women are limited and manpower is being drained by (1) selective service demands, and (2) the higher-paying and relatively more pleasant working conditions in shipyards, plane plants, and other munitions factories.

HEAVIES—THE HEADACHE

As the war develops, Army requirements may change, and the program for extra-heavy trucks may be cut. But even if strategy does not dictate a reduction, a cutback may be unavoidable. For, although the 85,000 extra-heavy vehicles represent only 10% of the probable output of all trucks next year—from the swashbuckling ½-ton jeep to the monster 100-ton log hauler—they're fast shaping up as 90% of the production problem.

20-Day Plane Tally

Acceptances only 2% greater than for similar period in August. Bombers near standstill, while transports slip. Navy fighters make best showing with 33% increase.

AIRPLANE PRODUCTION during the first 20 days of this month augurs only a modest gain over August. Acceptances of 4,187 planes were 1% greater than in the first 20 days of August. Even on the more significant airframe-weight basis, the gain was small—only 2%. This would compare with the 7% gain for the full month of August over July.

Bomber production as a whole showed no gain in the first 20 days; but heavy types—Flying Fortresses and Liberators—were 2% higher: 540 against 527.

Transports trailed 5% behind the August pace, but fighters were 12% ahead. Navy fighters were particularly strong, rising 33% above the August rate. One factor here was the acceptance of 183 Hellcats at Grumman's Bethpage, L.I., plant—35 more than in the first 20 days of August.

CORSAIRS GO ROLLING ALONG

Over at Columbus, Ohio, Curtiss showed signs of coming out of its prolonged slump; 43 SB2C Helldivers were accepted, more than double the entire total for August.

At Goodyear's Akron plant, the Navy's 2,000-horsepower, 400-miles-an-hour Corsair really began to roll off the assembly line. Acceptances of 47 exceeded the total for all of August by more than 50%, and were only 8 planes away from the full-month schedule for September.

Two B-29 long-range heavy (super) bombers were accepted at Boeing, Wichita, against a full-month schedule of 20. None was accepted in the first 20 days of August, though four came through in the final 11 days.

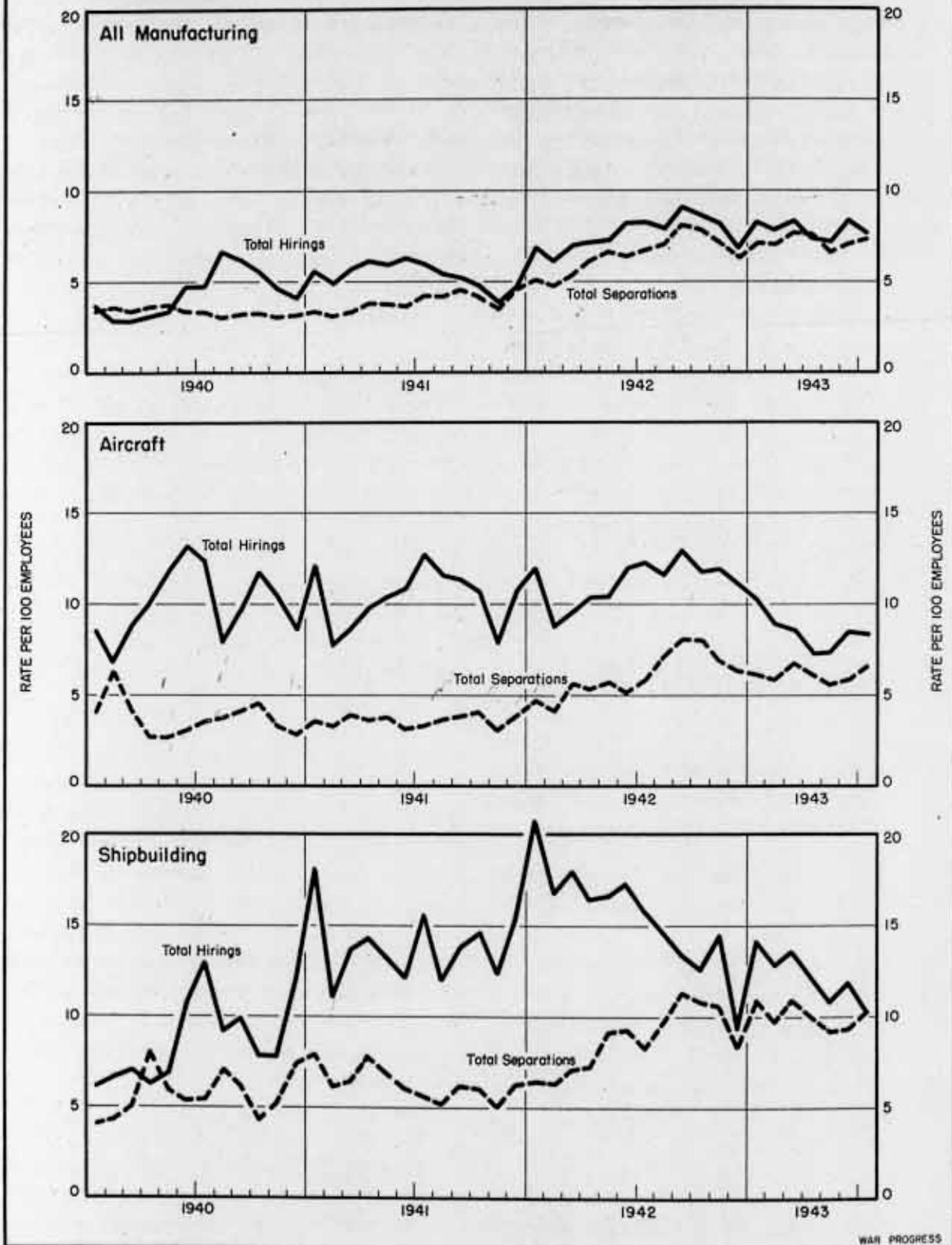
W-6 BECOMES W-7

The revised September schedule—W-7, which was completed on September 16—calls for 8,342 planes, or just about double the number accepted during the first 20 days. The W-6 plan slated 9,098 planes for September. To meet this reduced W-7 schedule would require the acceptance of more than 400 planes per day during the last third of the month. In the first 20 days, the daily average was 209.

The revisions from W-6 to W-7 included an 8% cut in heavy bombers from 1,014 to 937. In part, this takes account of recent behind-schedule output at Ford, Willow Run; and Boeing, Seattle.

INS AND OUTS IN LABOR

Industry is hard put to get new recruits; separations are still high — particularly in shipbuilding.



Out of the Open Hearth into the ...

Electric furnace. As demand for alloy steel subsides, plan is to convert open-hearth capacity back to carbon steel. But consumers have to change their habits.

FROM PEARL HARBOR until March, 1943, the demand for alloy steel had been so great that the steel industry was converting open-hearth furnaces to alloy steel production—and losing five tons of carbon steel for every four tons of alloy made. At the same time, new electric furnaces were being pushed into alloy production even before handling facilities—overhead cranes, etc.—had been put in place. But only three weeks ago an electric furnace was down because it did not have any orders!

That was probably an accident. The

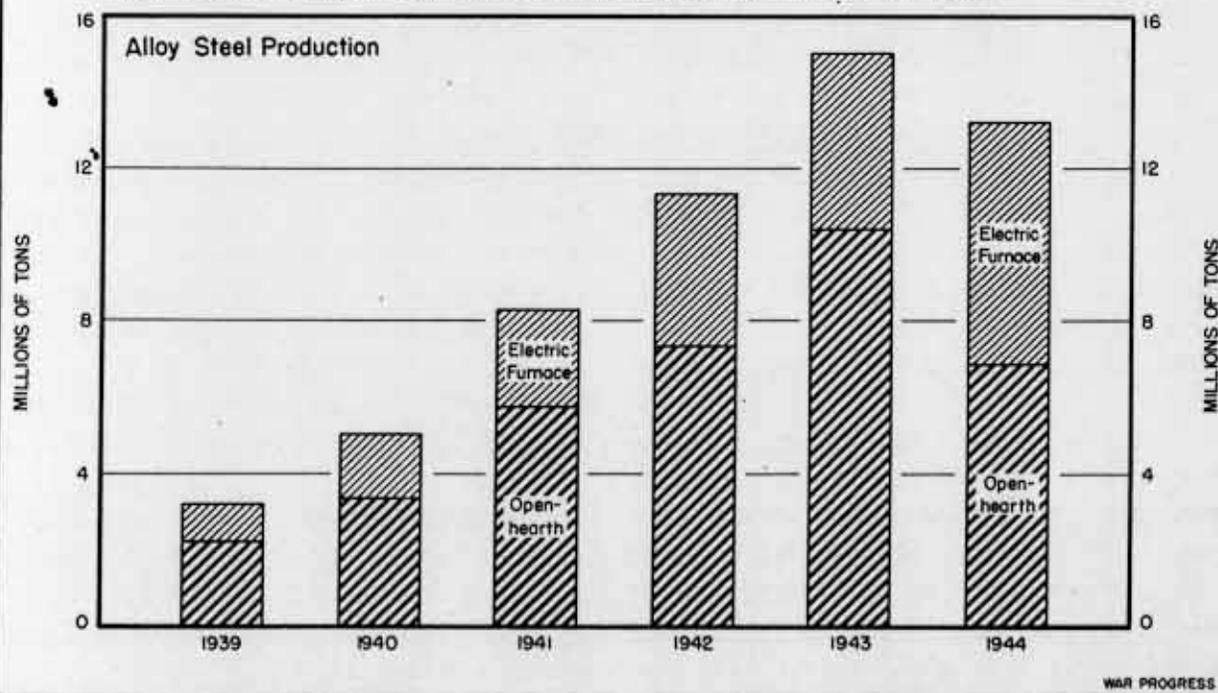
share-the-steel drive and a recent tendency to lighten inventories caused sufficient cancellations of contracts to leave this particular mill without any orders for this furnace. But the incident dramatizes a major problem in the steel industry today: to use existing and incoming electric furnace capacity so that open hearths can be released for making urgently-needed carbon steel.

CONVERSION NECESSARY

Although electric furnace capacity has been expanded specifically to meet the projected demands for high-quality alloy steel output, it did not expand fast enough. And it was necessary—through installing hot-topping, slow-cooling, and chipping equipment—to con-

THE RISE AND FALL OF ALLOY STEEL

Production has jumped fivefold since '39, but '44 needs are due to drop. As open-hearth output is cut, electric furnace portion will rise to 48%.



KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program-Checks paid (millions of dollars)-----	1,727	1,605	1,777	1,374	1,310
War bond sales (millions of dollars)-----	299	178	165	185	163
Wholesale prices (1926=100)					
All commodities-----	102.9 ^p	102.8 ^p	102.8 ^p	103.0	99.3
Farm products-----	123.6 ^p	123.2	123.2	122.4	107.1
Foods-----	104.5	104.8	105.8	107.1	102.0
All other than farm products and foods-----	97.4 ^p	97.4 ^p	97.3 ^p	96.6	95.7
Petroleum:					
Total carloadings-----	53,574	55,571	58,213	53,791	53,498
Movement of cars into the East-----	26,646	27,167	30,111	26,390	27,948
East coast stocks for civilian use (1940-41=100 Seas. Adj.)-----	42.5	41.9	36.8	29.2	59.8
Total stocks of residual fuel oil (thousands of barrels)-----	66,893	67,011	66,724	68,178	79,335
Bituminous Coal:					
Production (thousands of short tons, daily average)-----	2,026	2,002 ^p	2,005	2,100	2,137
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports-----	2,628	2,678	2,584	1,637	1,569
Gulf Coast ports-----	396	340	353	393	323
Pacific Coast ports-----	1,439	1,438	1,444	960	818
Unused steel capacity (% operations below capacity)-----	-0.6%	0.4%	0.6%	0.9%	3.8%
Department store sales (% change from a year ago)-----	+17%	+10%	+15%	-2%	+5%
p. preliminary					

vert open hearths to alloy steel production. As a result, open hearths consistently have produced two out of three tons of the country's alloy steel:

	Alloy Steel Production			
	Total	Elec. Furn.	Open Hearth	% Open Hearth
	(millions of tons)			
1939	3.2	1.0	2.2	68.8%
1940	5.0	1.7	3.3	66.0
1941	8.2	2.5	5.7	69.5
1942	11.3	4.0	7.3	64.6
1943	15.0	4.6	10.4	69.3

But now it is urgent to cut the ratio down to almost one-to-one. Already some conversion has taken place this year. In January, alloy steel production in the open hearth ran at an annual rate of nearly 11,000,000 tons a year; today it's down to 9,000,000. And useable alloy steel capacity for 1944

now shapes up like this:

	Tons
Electric furnace	6,400,000
Open hearth	9,000,000
Total	15,400,000

Yet estimated alloy steel requirements next year are only 13,200,000 tons, which means that 2,200,000 tons of open-hearth capacity for making alloy steels can be released for carbon steel production. (Since carbon steel production takes less time than alloy steel, the potential gain in carbon steel output is 2,640,000 tons.) Thus the desired distribution of alloy steel output next year would be as follows:

	Tons
Electric furnace	6,400,000
Open hearth	6,800,000
Total	13,200,000

Getting that ideal distribution, however, will not be easy.

First, some of the wartime alloy

steels have never been made in electric furnaces which means that electric furnaces will have to develop required metallurgical techniques. Moreover, some heat-treating and rolling-mill techniques will have to be changed.

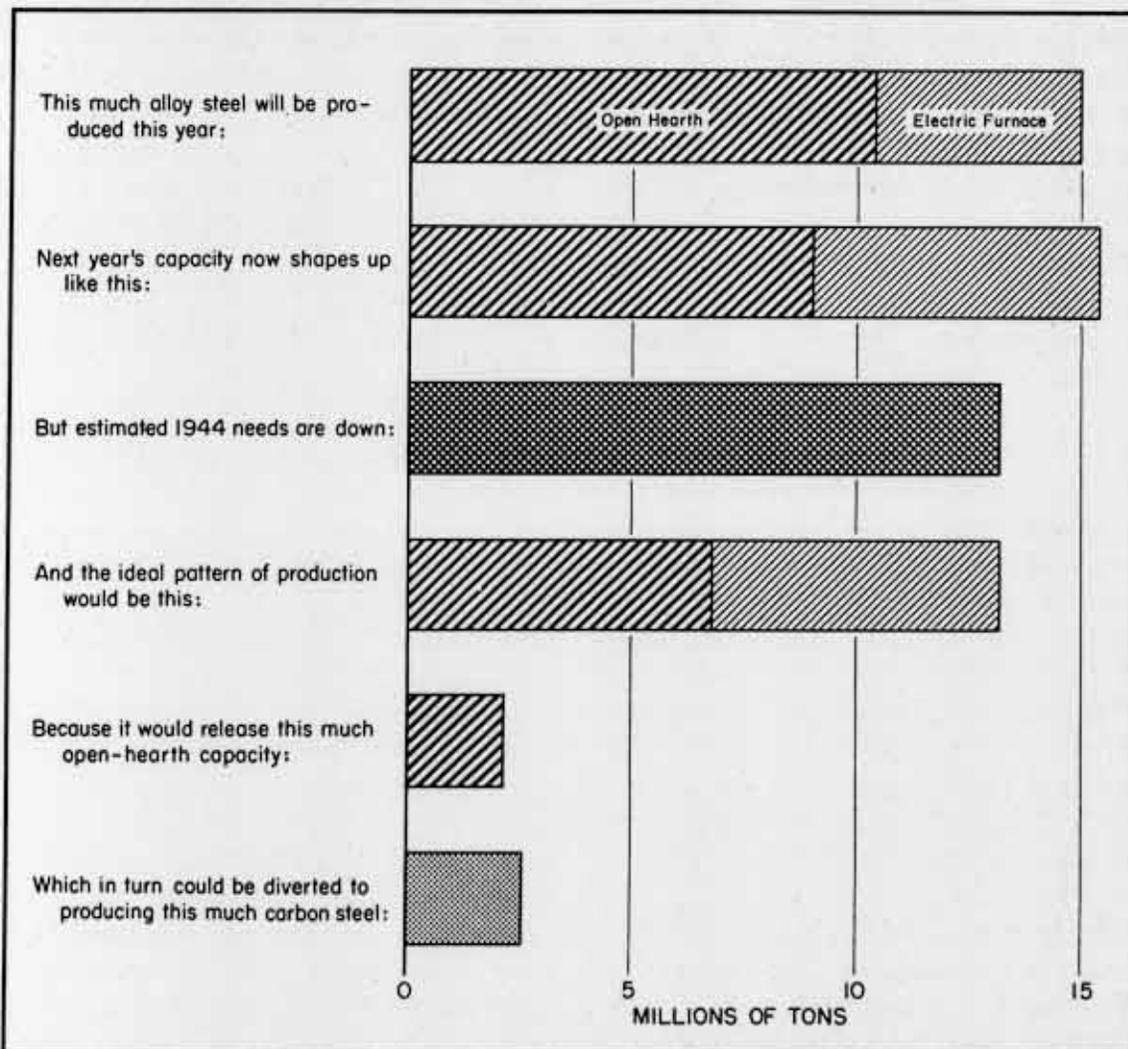
Second, electric furnace alloys cost more to produce than open-hearth alloys. Even though electric furnace steel is easier to fabricate and results in fewer rejections, some buyers have been reluctant to pay the differential unless

some adjustment is made by claimant agencies.

To assure the maximum overall production of steel, WPB's Steel Division has appealed to consumers to switch to electric furnace steel—and, to implement the appeal, the division has ordered alloy steel producers to shift orders for open-hearth alloys to electric furnaces whenever feasible. Further, the division is working with the Army, the Navy, and other claimant agen-

PUT AND TAKE IN ALLOY STEEL

Job is to use electric furnaces and release open hearths for carbon steel.



WAR PROGRESS

cies to accomplish this objective.

Aside from the pressure for boosting carbon steel capacity, there are two incidental reasons why it is important to utilize electric furnace capacity:

1. As a direct result of the step-up production drive of the War Production Board, steel output jumped 5% per month—375,000 tons. But if workers observe

that capacity is being unused, they may well ask why it is necessary to drive for more production in other furnaces.

2. Electric furnaces use alloying metals more economically than the open-hearth. Thus, the shift may further ease the supply-demand position of vanadium, molybdenum, and chrome, and help improve nickel's still critical position.

The Navy Gets the Warships

1943 deliveries of battleships, destroyers, subs, DEs, etc., won't come far from meeting schedules. But auxiliaries and minor craft prospects are not so promising.

THE NAVAL SHIP PROGRAM is now coming through. The value of work put in place each month has been increasing—it's around \$665,000,000 today as against about \$450,000,000 in January; and that work is beginning to show up in sharply increased deliveries. Moreover, during recent months actual deliveries have been coming much closer to schedules than earlier (chart, page 9).

MORE THAN DOUBLE '42

So far this year—through August—deliveries have run to \$4,100,000,000, or a little more than \$500,000,000 a month. WAR PROGRESS estimates (on the basis of past records in shipbuilding) that deliveries should run to more than \$2,700,000,000 in the final four months—or about \$675,000,000 a month. And deliveries for the year, at around \$6,800,000,000, will more than double the 1942 total of \$2,650,000,000.

NOT UP TO MARK

The \$6,800,000,000 estimated for 1943 does not come up to the mark set by the Navy as of April 1—the yardstick of the 1943 naval building program. It falls short by about 10%; it is also

short of schedule as of August 1—by about 8%. However, in battleships, carriers, cruisers, destroyers, submarines, destroyer escorts, and landing craft—vessels the Navy wants most—the showing runs much nearer the mark, and as a group they should make the total forecast as of April 1, 1943:

	April 1 Sched.	Est. Deliv.	% Deviation
	(millions)		
Big ships*....	\$779	\$907	+16%
Destroyers....	1,077	1,008	-6
Submarines....	334	318	-5
DEs.....	1,650	1,570	-5
Landing craft.	1,091	1,178	+8
Total.....	\$4,931	\$4,981	+1%

*Battleships, cruisers, carriers

In terms of schedules as of August 1, the showing may not be quite so strong—largely because the program for battleships, carriers, and cruisers was stepped up sharply. Actual deliveries of battleships, carriers, and cruisers as a group are apt to run below the August schedule (compared to 16% above the goals set for them in April). On the other hand, the destroyer escort program, which was reduced between April and August, should be met. August 1 schedules in these groups—up 4% from April 1 schedules—compare with esti-

mated deliveries as follows:

	Aug. 1 Est.	%
	<u>Sched. Deliv.</u>	<u>Deviation</u>
	(millions)	
Big ships	\$962	\$907 -6%
Destroyers ...	1,085	1,008 -6
Submarines ...	345	318 -5
DEs	1,570	1,570 —
Landing craft.	1,178	1,178 —
Total	\$5,140	\$4,981 -3%

Schedules for miscellaneous minor combat vessels and auxiliaries (which have been persistently laggard perform-

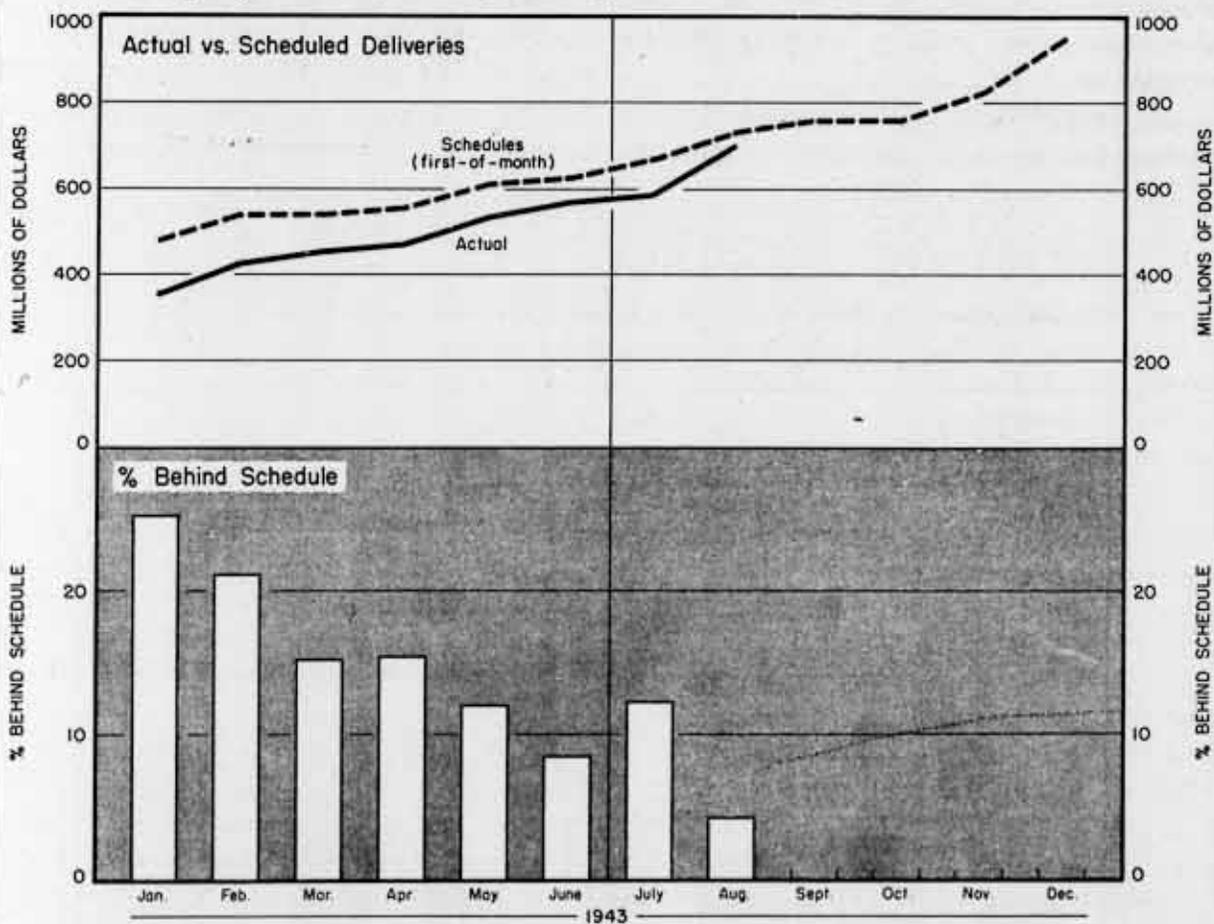
ers) underwent major reductions—20% and 7% respectively—from April 1 to August 1. But on the basis of past performances even these are not likely to be approached:

	Aug. 1 Est.	%
	<u>Sched. Deliv.</u>	<u>Deviation</u>
	(millions)	
Misc. minor combat	\$1,415	\$1,115 -21%
Auxiliaries .	550	440 -20
Total	\$1,965	\$1,555 -21%

Thus the deficit in these vessels

NAVAL PRODUCTION CLOSER TO MARK

Actual deliveries were 25% short of first-of-month schedules at the beginning of the year, from 4% to 12% recently.



Note: Schedules from August on are as of August 1.

WAR PROGRESS

is much greater than in the warship class. A portion of the above ships is not under the direct supervision of Navy's Bureau of Ships from keel-laying to delivery, being procured by others.

For all types of ships, the August 1 delivery schedules for the final third of 1943 rise steeply, totaling \$3,322,000,000, or \$800,000,000 per month. To achieve that average requires a big gain over recent delivery levels of around \$600,000,000 in July and \$700,000,000 in August. Indeed, according to schedule, deliveries would have to rise to \$950,000,000 in December, 35% above August. August deliveries, incidentally, were at an all-time peak. However, they were boosted by six DEs which came in ahead of schedule; hence the month may not be entirely representative.

It is probable that the same trends as heretofore will persist in the re-

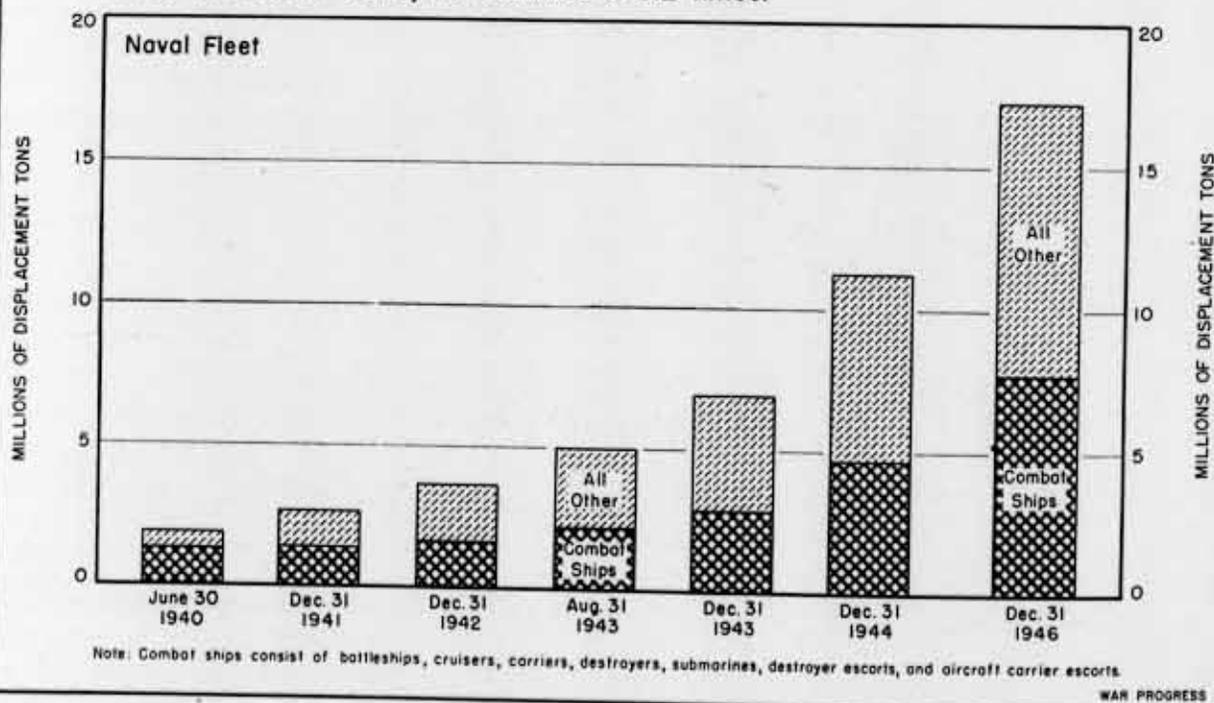
mainder of the year. The combat vessels — battleships, cruisers, destroyers, etc. — will probably make a better showing than the minor craft and auxiliaries. Here it is a case of putting greater emphasis on the bigger ships. Auxiliaries, however, may be helped by a higher preference rating than heretofore for materials and components.

Five major warships are scheduled for delivery in October and November: the aircraft carrier Wasp, the light carrier Bataan, the heavy cruisers Canberra and Quincy, and the light cruiser Miami. In December, the schedule calls for completion of five others: the aircraft carrier Hornet, the light carrier San Jacinto, and the light cruisers Vincennes, Houston, and Reno.

Delivery of all these vessels by the end of the year will require somewhat faster construction than has been attained on ships of comparable types in

GROWTH OF THE FLEET

By December, the Navy is expected to be 3.7 times as great as in June 1940; but by the end of 1946, the estimate is 9.2 times.



U.S. NAVY: 90% GAIN SINCE PEARL HARBOR

THE U.S. NAVY has increased about 170% since mid-1940 and 90% since Pearl Harbor. The log—past and future—follows (in displacement tons):

	Warship Tonnage (thousands of tons)	Total Tonnage
June 30, '40.....	1,313	1,875
Dec. 31, '41.....	1,391	2,636
Dec. 31, '42.....	1,649	3,668
Aug. 31, '43 (est.)	2,200	5,000
Dec. 31, '43*.....	2,852	6,910
Dec. 31, '46*.....	7,751	17,252

*Projected

About 44% of the current tonnage is in combat vessels—battleships, cruisers, submarines, destroyer escorts, etc. On August 31 there were 663 of these (less any losses not yet made public) compared to 383 when the defense program began on July 1, 1940. As a result of the transfer of destroyers to Britain and some losses, the fleet actually dropped to 349 combat

vessels as of December 31, 1941. From that point to August 31, 1943, the net increase in warships has been: five battleships, eight aircraft carriers, five cruisers, 121 destroyers, and 49 submarines.

And we now have: 22 battleships, 15 aircraft carriers, 43 cruisers, 295 destroyers, and 162 submarines. We also have 105 destroyer escorts and 21 aircraft carrier escorts; there was none of either at the beginning of the war.

The big unit rise has been in non-combatant ships. Since December 31, 1941, auxiliaries have jumped from 240 to nearly 600, patrol craft from 200 to 1,450, mine craft from 150 to nearly 500. Yard and district craft have more than doubled their 650 Pearl Harbor total. There are about 750 large-sized landing craft (not classed as combat vessels) and more than 13,000 smaller ones; none was on hand in 1940.

the past. A large part of the 43 destroyers, most of the 28 submarines, and all of the 158 DEs remaining to be delivered in the last four months under the August 1 schedule should come through. Indeed, DEs might actually beat schedule. But the more than 300 auxiliaries on the docket seem well beyond reach.

War Progress Notes

STRUCTURAL TURNAROUND

A YEAR AGO there wasn't enough fabricated structural steel to go around; ships, construction, industrial equipment were held up for want of it. Today, structural steel shipments are less than a third of their wartime peak—

60,000 tons a month as against 217,700 tons in October, 1941. And the backlog has dropped from a peak of 869,800 tons at the end of June, 1942, to 286,000 tons.

HIRING 5 TO HOLD 1

SOME IDEA of what manufacturers are up against in holding on to labor can be gleaned from the turnover statistics. In the airframe industry, for example, for every five workers hired during July, four left—either to join the Army, take another job, or what not. Which in effect is the same as saying that to hold on to one worker, it was necessary to hire five. In shipbuilding, as many left as were hired, a deterioration since early this year (chart, page 4).

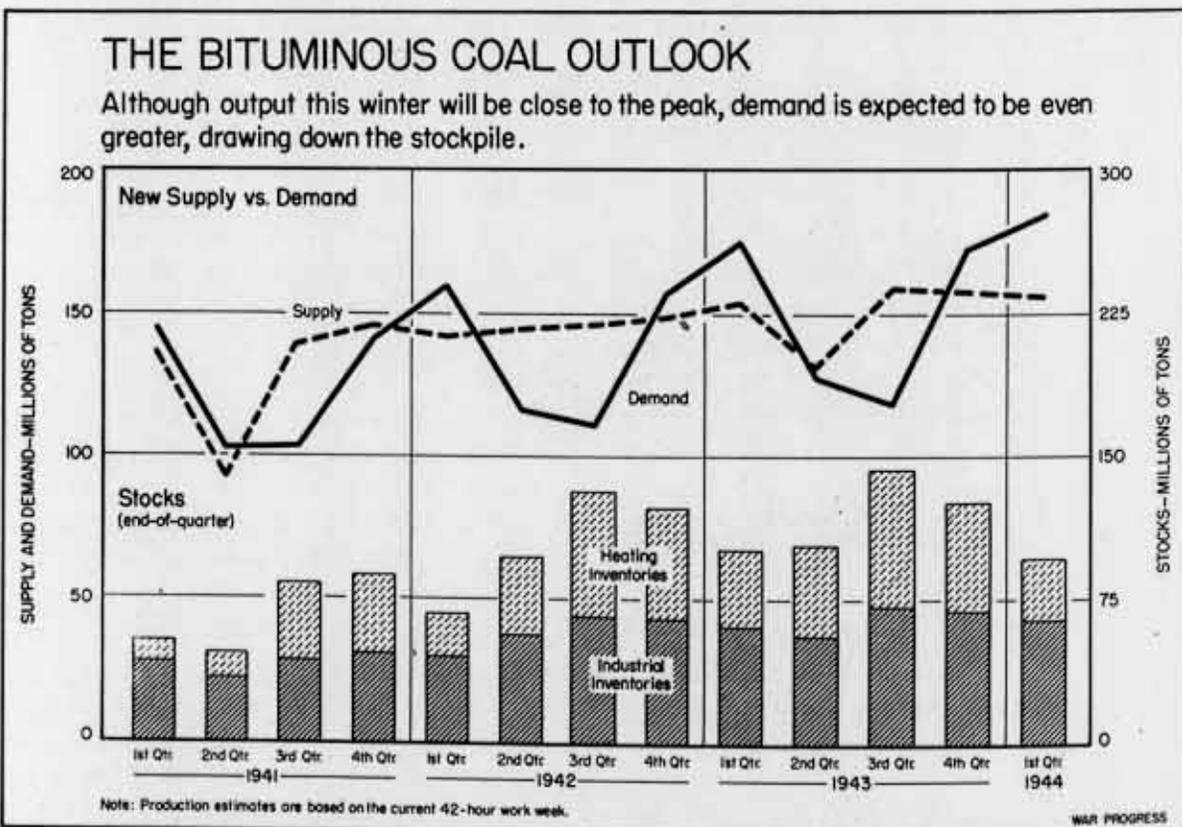
And in manufacturing, as a whole, for every 30 newcomers, there were 29 separations. This last figure shows how hard it is to expand the nation's factory force. But it has its favorable implications—to the extent that workers leave nonwar plants for war plants.

OUT OF THE COAL PITS

STATISTICALLY SPEAKING, there is almost enough bituminous coal to meet rising demands. By the end of this month, coal stocks (which include industrial and heating inventories) are expected to be 142,000,000 tons—the highest on record. Production for the next six months will be around 312,000,000 tons and demand will run about 358,000,000 tons for same period, the excess of demand consisting largely of normal winter heating needs. Thus the stockpile at the end of March, 1944, will be cut to some 95,000,000 tons, 5% below March,

1943, but 40% ahead of March, 1942. (At the end of March, 1942, there were 38 days' supply as against 52 days' in March, 1943, and 46 days' in March, 1944.) And if the work week is lengthened to 48 hours, current production could take care of demand with no serious drain on the industrial stockpile.

But this is not the whole story. One of the major problems is distribution—which has two phases: (1) the shipping of coal from the mines to the point of destination on an already-overtaxed transportation system, and (2) the distribution of the coal by the retail dealers to the consumer. Here the difficulty is that the truck drivers who deliver coal are being drafted or are leaving their jobs for higher pay and for other reasons. These drivers are considered "locally needed" wherever an application has been accepted by the War Manpower Commission.



SELECTED MONTHLY STATISTICS

Employment - Hours and Earnings - Labor Turnover

	Latest Month*	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Same Month 1939	Same Month 1937
NONAGRIC. EMPLOYMENT-TOTAL (thousands)							
Manufacturing Total	38,295 ^P	38,383	38,484 ^R	37,958	37,802	29,955	n.a.
Durable Goods	16,159 ^P	16,136	16,056	15,851	14,980	10,117	—
Nondurable Goods	9,663 ^P	9,617	9,585	9,305	8,374	4,290	—
Government	6,496 ^P	6,519	6,471	6,546	6,606	5,827	—
Other	5,861 ^P	5,867	5,937 ^R	5,837	5,323	3,923	n.a.
Other	16,275 ^P	16,380	16,491	16,270	17,499	15,915	n.a.
AVERAGE HOURLY EARNINGS (Cents)							
All Manufacturing Industries	96.3 ^P	95.9	95.3 ^R	91.9	85.6	62.6	n.a.
Durable Goods	106.1 ^P	105.4	105.0	101.7	94.9	69.1	n.a.
Nondurable Goods	80.6 ^P	80.4	79.6 ^R	76.8	72.5	57.8	n.a.
Bituminous Coal Mining	115.0 ^P	112.4	112.0 ^R	108.5	105.3	89.2	88.1
Metalliferous Mining	98.7 ^P	98.3	98.4	94.1	89.1 ^R	68.8	71.2
AVERAGE HOURS PER WEEK							
All Manufacturing Industries	44.4 ^P	45.2	45.2 ^R	44.2	42.6	36.8	n.a.
Durable Goods	46.0 ^P	46.8	46.9 ^R	45.9	44.8	36.4	n.a.
Nondurable Goods	42.2 ^P	42.8	42.8	41.8	39.8	37.1	n.a.
Bituminous Coal Mining	37.1 ^P	28.4	35.2 ^R	34.7	30.5	24.4	25.0
Metalliferous Mining	43.6 ^P	44.9	44.3	43.3	42.1 ^R	36.4	42.4
LABOR TURNOVER IN MFG. INDUSTRIES † (rate per hundred employees)							
All Manufacturing							
Accessions	7.68	8.40 ^R	7.18	8.28	8.28	4.16	3.36
Separations - Total	7.43	7.07 ^R	6.57	7.11	6.73	3.36	3.52
Quits	5.52	5.20 ^R	4.81	4.45	4.02	0.70	1.25
Military Separations	0.68	0.69	0.69	1.26	0.93	n.a.	n.a.
Aircraft							
Quits	5.23	4.55 ^R	4.23	3.86	3.76	1.44	1.47
Military Separations	0.74	0.68	0.63	1.70	1.34	n.a.	n.a.
Shipbuilding							
Quits	6.80	6.20	6.20	6.98	4.67	0.67	1.24
Military Separations	1.04	1.06 ^R	1.10	1.80	1.07	n.a.	n.a.

* NONAGRICULTURAL EMPLOYMENT, AUGUST; HOURS AND EARNINGS AND LABOR TURNOVER, JULY. † RATES BEGINNING 1943
REFER TO ALL EMPLOYEES RATHER THAN TO WAGE EARNERS ONLY AND ARE NOT STRICTLY COMPARABLE WITH EARLIER DATA.
N.A. NOT AVAILABLE. P. PRELIMINARY. R. REVISED.

REPORTS ON REPORTS

Trade in Tin

Tin (confidential; pp. 10) traces the growing importance of Bolivian tin to the U.S. and U.K., and calculates the probable effect of postwar changes on that country's economy.

(Coordinator of Inter-American Affairs, Research Division)

Rubber Outlook

A 30% expansion of rubber manufacturing capacity in 1944, at a cost to the industry of about \$80,000,000, will be required to handle the anticipated

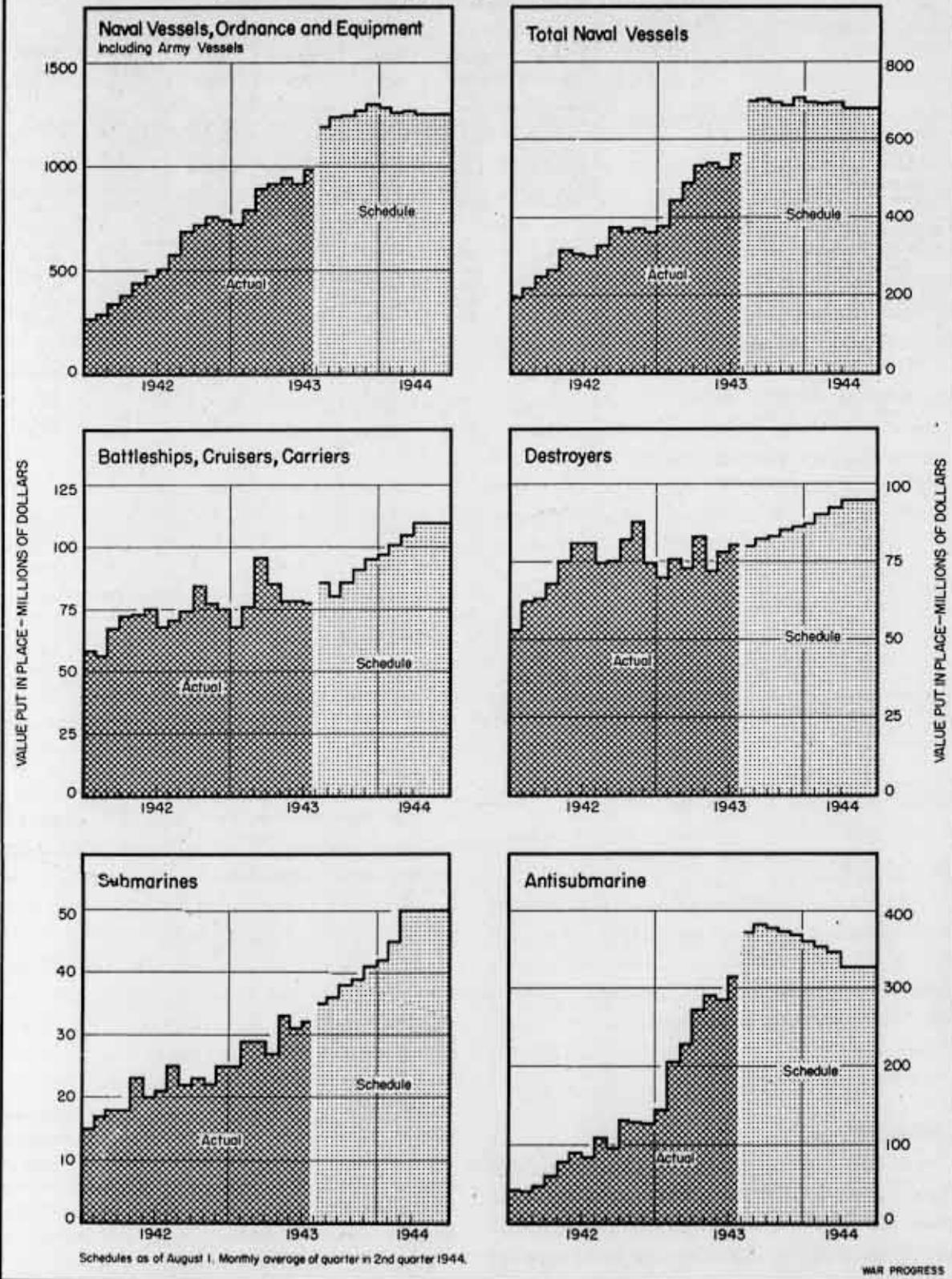
increase in synthetic rubber production, and to compensate for the 20% greater milling and processing time needed by synthetics. *Interim Report on the Rubber Program* (confidential; pp. 16) records the success in conversion of many major products to synthetics, and cites the Army's tests showing large savings in crude rubber by substituting rayon tire cord for cotton in heavy-duty tires. (War Production Board, Document 247)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

CONFIDENTIAL

PRODUCTION PROGRESS

Naval Vessels, Ordnance and Equipment; Army Vessels; Merchant Vessels

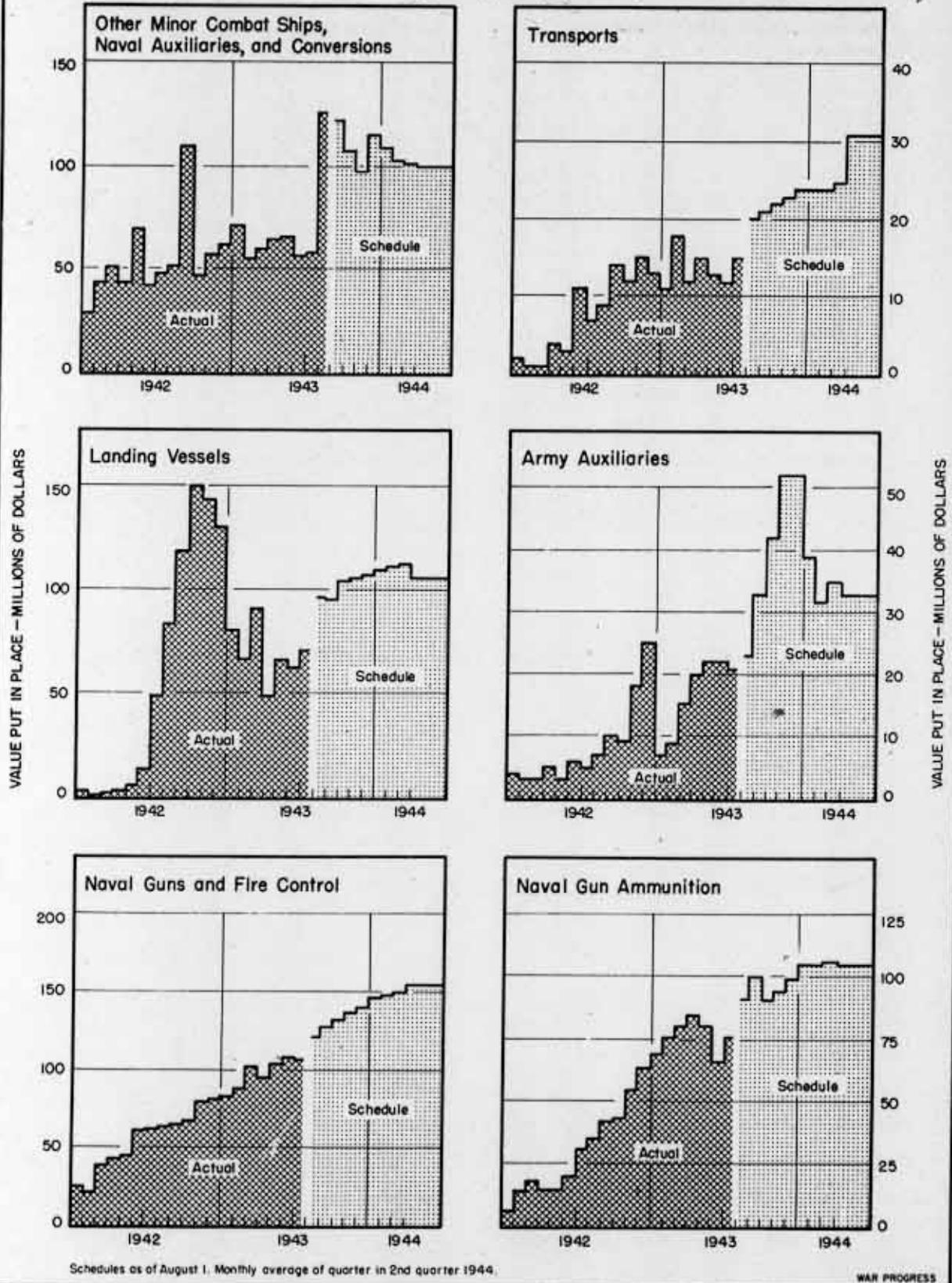


CONFIDENTIAL

WAR PROGRESS

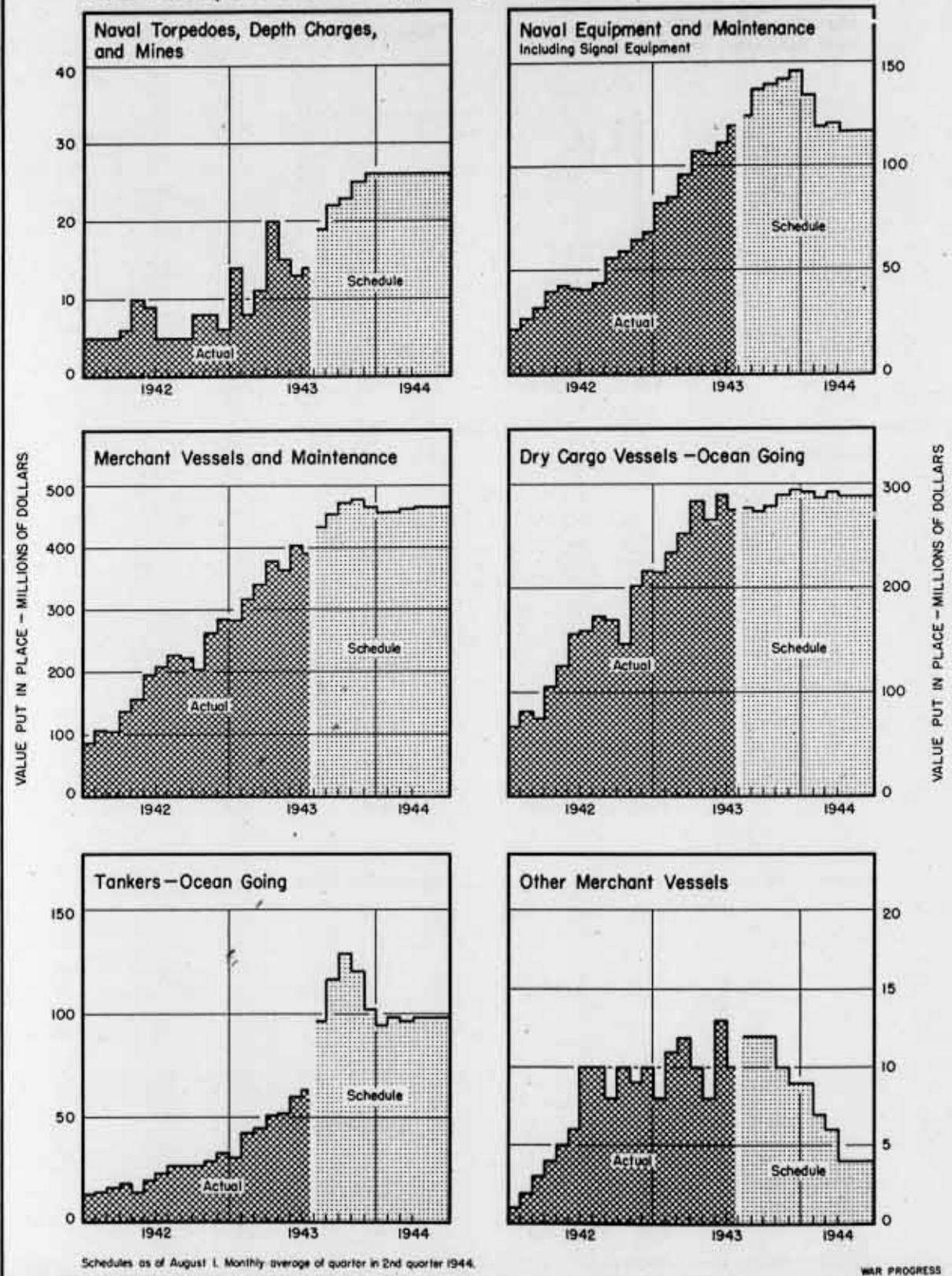
PRODUCTION PROGRESS

Naval Vessels, Ordnance and Equipment; Army Vessels, Merchant Vessels



PRODUCTION PROGRESS

Naval Vessels, Ordnance and Equipment; Army Vessels, Merchant Vessels



The President

WAR PROGRESS

Confidential
(British Secret)

DECLASSIFIED
E.O. 11652, Sec. 1.2(b) and 1.4(c) of (S)
Commerce Dept. Letter, 11-24-78
By 11127, BAA MAR 29 1973

Half the World's Munitions

Homes, Yes; Neighborhood Movies, No

What About the Zinc Supply?

Production Progress Tables

Number 159

October 2, 1943

As We Sow, Hitler and Tojo Reap

Mounting United Nations superiority in war production shows up on battlefield. U.S. will make 50% of the world's munitions in 1944. Need now is for selective output.

IT IS ALMOST A CLICHE to say that in war what happens on the battlefronts is a reflection of what has gone before on the home fronts. In this war, for example, Germany, Japan, and Italy were preparing for conflict years before either the invasion of Poland or the assault on Pearl Harbor. And the German conquest of France and the Japanese investment of the Philippines and Singapore reflect that preparation. The Axis had overwhelming initial superiority. But today the Axis head start in production has been more than overcome. And

it is showing up on the battlefields in New Guinea, Italy, and along the Dnieper, as well as in the statistics.

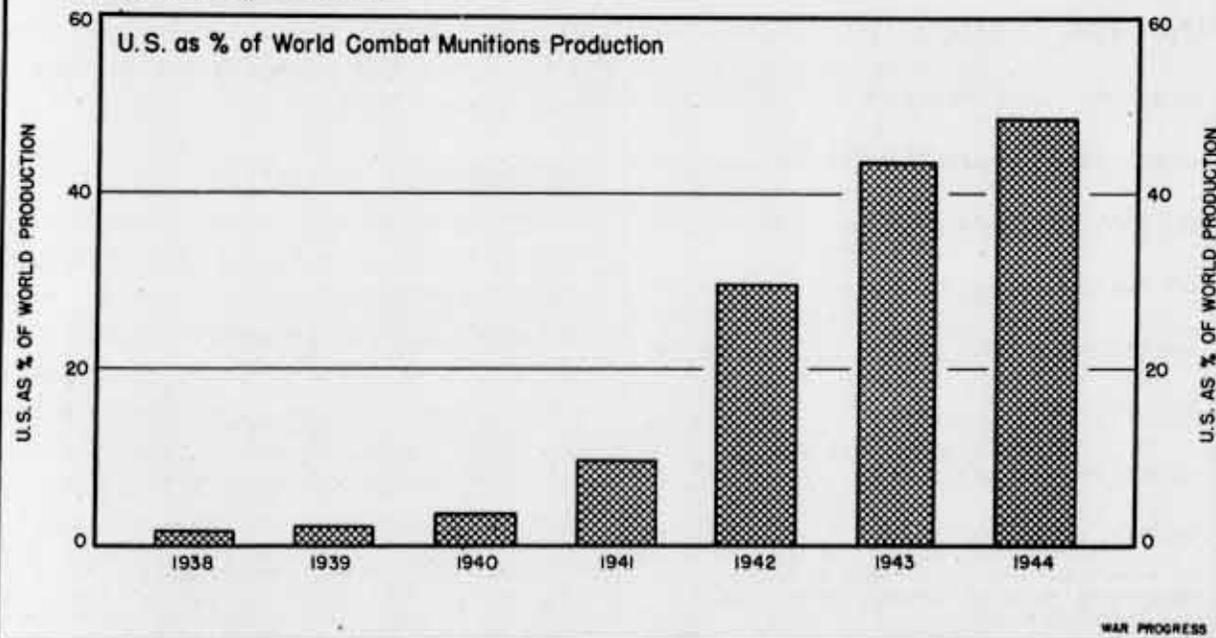
DATA MAKE A CASE

War Production Board's Planning Division virtually charts the course of the war with some statistical estimates on production in Axis and Axis-controlled countries and in the United Nations. The data, admittedly, are subject to error, depending as they do on information pieced together from prewar economic knowledge and during-the-war deductions, based on intelligence, newspaper statements, etc. But there's no doubt that the data make a case.

In 1938, in 1939, and still in 1940, for example, German and Italian war

U.S.—"ON THE SIDE OF THE STRONGEST BATTALIONS."

From 2% in 1939, this country's combat munitions output will rise to almost half the world's production.



preparations outran those of Great Britain and France by an overwhelming margin—something like 5-to-1 in 1938; by about 3-to-1 in 1939, and by about 2-to-1 in 1940. Result: Dunkerque and the fall of France.

But in 1941 the scales tipped. U.S. production was beginning to roll, lend-lease had started, and in June, Germany attacked Russia, bringing the weight of Russian production and preparation against Hitler. Then in December, Japanese planes bombed Pearl Harbor, and the United States came in as an all-out but not a full-grown combatant—this country was still tooling up. And actual munitions output for that year stacked up as six for the Allies—the United States, Canada, Britain, and Soviet Russia—to five for the Axis—Germany, Japan, and Italy (chart, page 3).

PREPONDERANT PRODUCTION

However, it was not yet sufficient to overcome the Axis stockpiles. But in 1942, production progress began to tell. For every tank, plane, or gun made by the Axis, the United Nations,

in effect, produced two. And they showed up at Stalingrad, North Africa, and the series of successes on sea and land in the Pacific. And this year the preponderance of production was further extended—the estimated margin is 3-to-1, and it equates out to the invasion of Sicily and southern Italy, the capture of Lae, Salamaua, and Finschhafen, the bombings of the Rhineland, Hamburg, and Berlin, and the German retreat in Russia.

ALLIES LEAD 4-TO-1

What's more, in 1944, the margin in favor of the United Nations will be almost 4-to-1 in combat munitions. And of the United Nations total U.S. production will run to 60%. Indeed, U.S. production next year will amount to almost 50% of the world total—that from a mere 2% in 1939 (chart, page 1)'

The reason for the disparity is clear. The war output of Germany and Japan is no longer expanding. Indeed, there is a strong possibility that bombings of German industrial areas may have reduced production (though the data conservatively assume only a moderate recession since 1942). On the other hand, United Nations production—particularly in the United States—still has some lift in it and probably won't reach a peak before 1944.

PREREQUISITES OF VICTORY

The conclusion, as the Planning Division aptly puts it, is that "the economic prerequisites of victory are most assuredly here. Indeed, it seems possible that victory could be attained... with a somewhat less pronounced superiority in output" and without loss of time. The point is that all the United Nations, and particularly the United States, have come a long way since 1939 and 1941. Whereas in those days the Army and the Navy needed all they could

IN THIS ISSUE:

AS WE SOW, HITLER AND TOJO REAP	1
HOMES, YES; NEIGHBORHOOD MOVIES, NO	4
KEY STATISTICS OF THE WEEK	7
OFF THE CRITICAL LIST: ZINC	8
WAR PROGRESS NOTES	10
REPORTS ON REPORTS	10
SELECTED MONTHLY STATISTICS	11
PRODUCTION PROGRESS TABLES	12, 14, 16
PRODUCTION PROGRESS (GENERAL SUMMARY AND SELECTED ITEMS)	13, 15

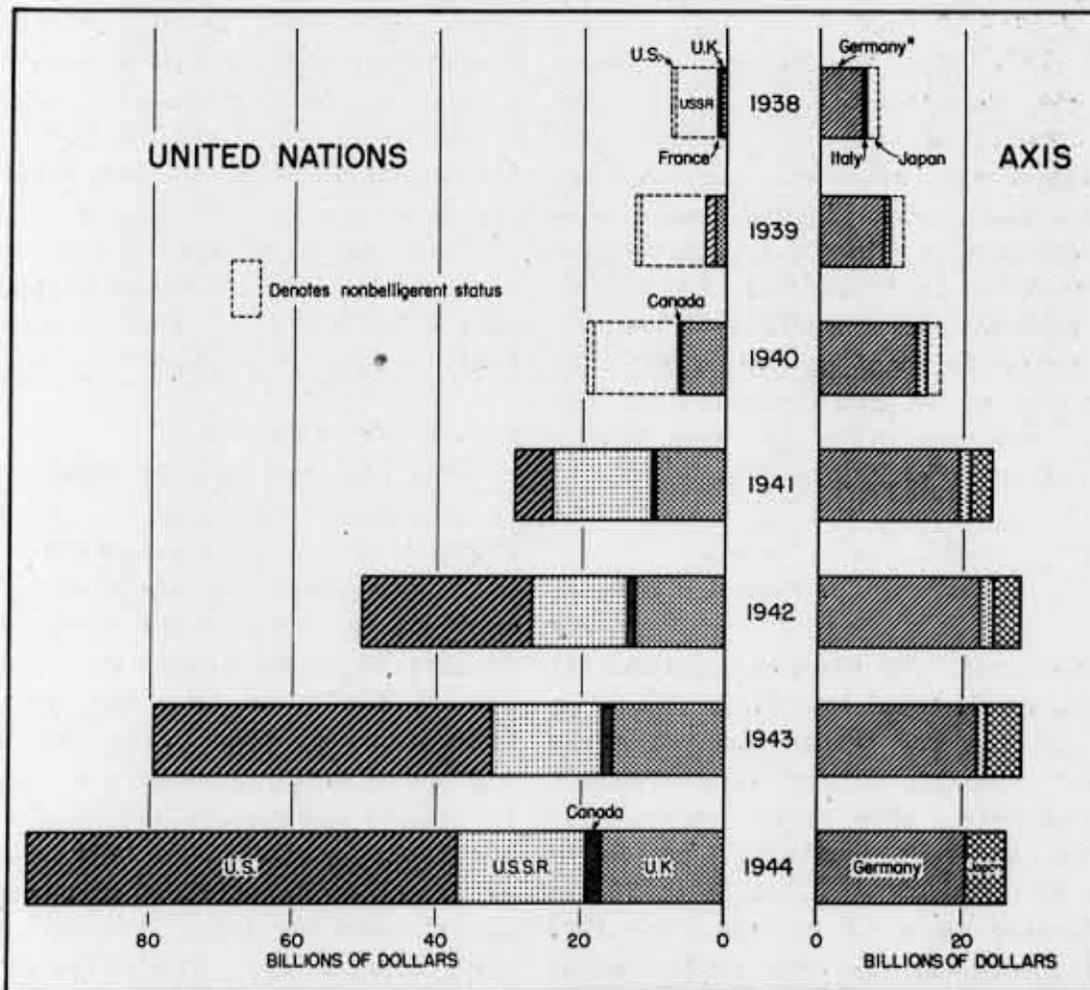
get of everything—rifles, antiaircraft guns, destroyers, merchant ships, tanks, and planes—today stockpiles are sufficiently large to permit cutbacks. Of these, tanks and bombs have been striking examples.

The superiority of the Allies—mounting day by day—re-emphasizes the need for selective production, for screening all requirements so as to eliminate weapons which are obsolete or obsolescent, for slimming programs in which stocks already built up are large and

don't seem likely to be used. In short, the productive superiority suggests that the time has come for taking a realistic inventory of what we have on hand in the light of current and prospective schedules. To pursue a produce-everything-at-topspeed-until-the-war's-won policy would result in dangerous postwar stockpiles—not only stockpiles of munitions, but stockpiles of the materials that go into munitions. Zinc (discussed on page 8) may serve as an example.

THE MUNITIONS HANDICAP

Germany and Italy got off to a head start over Britain and France, but the Allies (with Russia and the U.S. added) have more than caught up.



*Includes occupied territories.

WAR PROGRESS

Homes, Yes; Neighborhood Movies, No

Provisions for stores, schools, hospitals, restaurants, etc. in war housing areas have lagged behind residential building. Result: Belated rush to aid tough spots.

IN RECENT PREWAR YEARS, for every \$3 spent on residential building, \$2 were spent on community facilities—schools, hospitals, sewers, water, stores, theaters, etc. New homes were invariably followed by the neighborhood movie, grocer, tailor, cobbler, restaurant, and pharmacist. But 1939 and 1940 were the last years which approached that \$3-to-\$2 relationship.

FROM 3-TO-2 TO 7-TO-1

In 1941, though new residential housing was encouraged in defense areas, the compelling need in munitions for materials such as steel, copper, aluminum, and lumber clamped down on the construction of commercial, religious, educational, institutional, and social and recreational structures. Result: for every \$4 spent on new homes, only \$1 was spent on new community facilities. And the ratio has been moving farther apart ever since:

1942..... 5-to-1
1943..... 7-to-1

This year, for example, residential building will total some \$1,400,000,000; but outlays for things such as movie houses, schools, clinics, bowling alleys, food markets, shoe repair shops, drug stores, and restaurants will amount to only \$200,000,000. If the \$3-to-\$2 relationship were to prevail, the 1943 expenditure would be expected to approximate \$900,000,000. Thus, the deficit from normal expectancy in this year

alone runs to \$700,000,000. For the three years, 1941-1943 inclusive, it cumulates to an estimated total of \$2,800,000,000. And that goes far to explain such phenomena as these:

Some 20,000 persons in San Diego's Linda Vista housing project are 4½ miles from the nearest shopping center.

Almost 1,000 persons per month reportedly leave Bremerton, Wash., largely because of lack of medical care.

In and near seven shipyards around San Francisco Bay, employing 176,000 persons, there are lunch facilities for only about 15,000.

In Mobile, Ala., 2,000 children of school age can't be accommodated in classrooms, despite double sessions.

Because transportation is inadequate, 1,500 family units and 700 dormitories for Mare Island (Calif.) Navy Yard workers were recently unoccupied.

Seven out of 10 girls recruited for work in the airfields around Dayton, O., quit after the first week because recreational facilities weren't available.

PATTERN IN IMBALANCE

What happened is a familiar pattern in imbalance: The urgency of providing shelter for migrant war workers brought a 13-year peak for residential building in 1941; but outlays for complementary facilities actually declined. In October of that year, the War Production Board issued Order L-41, restricting the use of building materials in a wide variety of construction including schools, hospitals, garages, beer halls, bowling alleys, beauty parlors, and theaters. About six months later, the use of Federal (Lanham Act) funds for civilian recreation programs was discontinued.

At the outset of the war program,

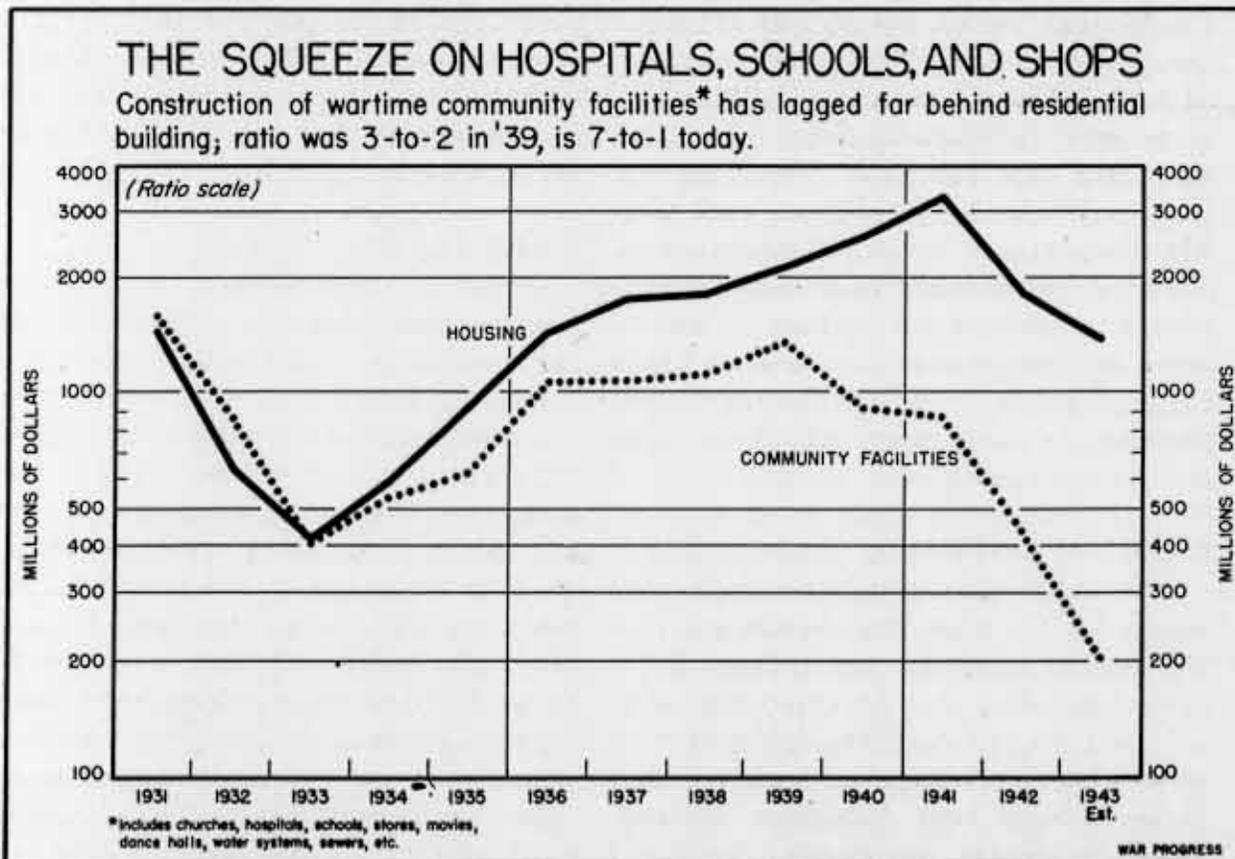
the bulk of new residential building was in or close to large communities. The need for complementary facilities was not so imperative. But in 1941 and 1942, war plants were located on the outskirts of—or far away from—large cities: Ford at Willow Run, Kaiser at Bremerton, Dupont at Sylacauga, Atlas Powder at Ravenna, Basic Magnesium at Las Vegas. New housing followed—but not community facilities.

Today, whole areas are critically short of schools, stores, hospitals, restaurants, and recreation centers—San Diego, Hampton Roads, Mobile, Portland-Vancouver, Charleston, S.C., and San Francisco Bay, to name only a few. Government housing projects around Newport, R.I., for instance, are in areas of poor transportation and short gasoline rations. Yet, none of them has a food market or a recreation center for children.

Sometimes, this lack of essentials is the result of bad planning. Outside of Washington, D.C., more than 1,000 families have been living at the Fairlington project since May, 1943. But priorities for a shopping center have only just been requested—and Fairlington is 2½ miles from the nearest shopping center. At other times, the difficulty is to get merchants to invest in stores in new housing centers. Although the Federal Public Housing Authority is building shops at Richmond, Calif., there aren't enough takers. It's the same story in Portland, Me.

EXAMPLE: BRUNSWICK, GA.

Brunswick, Ga., is an example of an area suffering from community-facility deficiencies. In 1940 its population was 15,000; today it's more than 60,000. Brunswick has only one hospital with 60 beds, two bowling alleys, seven gar-



bage trucks, and a recreation center the size of a large conference room at the Social Security Building. Schools are on a two-shift basis and still overcrowded. Restaurants frequently run out of food after the midday meal. There is an acute shortage of paper cups, eating utensils, and sterilizing machinery. The ice supply is chronically low. Four movie theaters, seating 1,100, operate 17 hours a day trying to meet the demand; average capacity in a U.S. town this size is 4,000 seats.

ABSENTEEISM REACHES 30%

Absenteeism in war plants around Brunswick goes as high as 30% on many days. And at the J. A. Jones Construction Company (shipbuilding)—the largest employer—almost 12 per 100 workers quit every month, compared with around 7 per 100 for the shipbuilding industry as a whole.

Child care is another problem. Though the Federal Works Agency has allotted enough funds (matched by communities on a 50-50 basis) to setup 3,385 nurseries and child-care centers, less than half have been put into operation—and that half is being used at less than 50% of capacity. Often, limitations of one kind or another have made it necessary to locate these centers in structures far from either the home or place of employment, thus defeating their purpose: to get workers out of the home and into industry.

CHILD-CARE CONTRAST

The brief history of the child-care center in the Knox Hill Development on the edge of southeast Washington, D.C., is not unusual. Opened last July, with a capacity of 50 children, no more than 18 were ever left there on a single day. It was closed last Saturday. By contrast, a similar center near the heart

of the city—and only a few hundred yards from bus and street car lines—runs at top capacity: 25 children per day.

But even when the job of providing community facilities has been approached on an overall basis—from food to theaters, from beauty shops to game rooms—the shortage of workers in the service industries brings unplanned-for problems.

LAUNDRYLESS COMMUNITY

There is no laundry in Henry J. Kaiser's Vanport City (pop. 40,000), in the Vancouver-Portland area. Average hourly earnings in the nearby shipyard are \$1.26, those for laundry workers 62¢ (recently lifted from 47¢). So even if necessary equipment were to be made available, there is no assurance that enough labor could be mustered to operate it. Ford at Willow Run faces substantially the same problem. And at Consolidated Vultee Aircraft Corporation, in Downey, Calif., the management—with a flair for hyperbole—says that one laundry worker is worth three new workers to its plant.

A TALE OF FIVE CITIES

Over the past several months—with manpower becoming the critical factor in munitions output—the problem of community facilities and services has received increasing attention. During this year, a House Naval Affairs subcommittee conducted hearings in five war production areas—Hampton Roads, Va.; San Diego and San Francisco, Calif.; Newport, R.I.; and Portland, Me.—and concluded that the lack of schools, hospitals, stores, restaurants, nurseries, recreation centers, sanitary equipment—was (1) contributing to the high labor turnover, (2) endangering public health, (3) breeding moral de-

KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program—Checks paid (millions of dollars)-----	1,380	1,727	1,478	1,308	1,308
War bond sales (millions of dollars)-----	886	299	180	204	196
Wholesale prices (1926=100)					
All commodities-----	102.9 ^p	102.9 ^p	102.9 ^p	103.3	99.4
Farm products-----	123.8 ^p	123.6 ^p	124.0	124.2	107.3
Foods-----	104.9	104.5	105.5	107.6	102.0
All other than farm products and foods-----	97.4 ^p	97.4	97.3	96.6	95.7
Petroleum:					
Total carloadings-----	53,414	53,574	55,875	54,791	54,644
Movement of cars into the East-----	23,979	26,646	28,125	26,181	28,557
East coast stocks for civilian use (1940-41=100 Seas. Adj.)--	n. a.	42.5	39.1	29.7	59.6
Total stocks of residual fuel oil (thousands of barrels)-----	n. a.	66,893	67,250	67,938	78,943
Bituminous Coal:					
Production (thousands of short tons, daily average)-----	2,017	2,031 ⁿ	2,022	2,060	1,912
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports-----	2,678	2,628	2,651	1,643	1,354
Gulf Coast ports-----	368	396	351	362	271
Pacific Coast ports-----	1,448	1,439	1,359	939	829
Unused steel capacity (% operations below capacity)-----	-0.8%	-0.6%	0.6%	0	2.7%
Department store sales (% change from a year ago)-----	-2%	+17%	+1%	-2%	-5%

p. preliminary r. revised n. a. not available

linquency, and (4) harming worker morale.

In April, 1943, the President established the Committee for Congested Production Areas to coordinate the work of all Federal agencies concerned with specified war-jammed communities—the War Production Board, National Housing Agency, War Manpower Commission, Federal Security Agency, War Food Administration, Federal Works Agency, etc.—and to cooperate with state and local governments.

TOO LITTLE AND TOO LATE

Two months later, the use of Federal (Lanham Act) funds for civilian recreation programs was resumed, and the Federal Security Agency's Office of Community War Services immediately expanded the scope of its services in arms production centers, including little-publicized war communities such as Key West, Fla.; Seneca, Ill.; Presque Isle, Me.;

Sturgeon Bay, Wis., and Garden City, Mich.

At this stage of the war effort, it is too late to make up for all, or even a major part, of the accumulated deficit in community facilities. The job as a whole is too big and has to be tackled largely on a spot basis—building a new movie in one town, trying to get laundry workers in another, improving hospital services in a third, converting a garage into a play center in a fourth, and so on. As a starter, eight congested production areas have been singled out for such green-light treatment:

Brunswick, Ga.
Charleston, S.C.
Hampton Roads, Va.
Newport, R.I.
Portland, Me.
Puget Sound
San Diego, Calif.
San Francisco Bay

But by no means will all overcrowded

CONFIDENTIAL

under-facilitated cities and towns be given special consideration. Top emphasis will have to be confined to those in which the problem has become super-critical.

Off the Critical List

Increased supply and decreased demands of Britain and Russia have made zinc easy for the first time in the war. Result is stock pile objective is nearer realization.

TWO WEEKS AGO, the British announced that they would not need any more zinc from us; previously they had been taking 5,000 tons monthly—and earlier this year they had requested 11,000 tons monthly. A short time before, recalculations of munitions requirements and labor shortages forced U.S. brass mill requirements for zinc down 14,000 tons. Moreover, Russian monthly demands dropped from 3,500 tons to 1,100 tons. The net result is that monthly slab zinc requirements are off 21,400 tons and domestic slab zinc stocks at the end of the year may reach 184,000 tons—two-and-a-half months' supply at current levels of consumption. And for the first time since the war started, zinc is no longer a critical metal.

But zinc was a critical war metal early. In September, 1939, the position seemed comfortable enough—slab zinc stocks amounted to 123,000 tons, a good margin at going consumption levels then. But by March, 1941, this stock had dwindled to 10,600 tons, even though producers boosted prices from 4.75¢ a pound, East St. Louis, to 7.25¢; and monthly output rose from 41,000 to 66,000 tons. As a result, the Office of Production Management felt called upon to institute priorities which superseded a voluntary allocation system set up by the

producers. At the same time, OPM started an emergency "pool" out of each month's zinc production to take care of critical military needs.

Stocks continued low—19,000 tons at the end of September, 1941. To bring marginal mines into production, the Office of Price Administration allowed a price increase to 8.25¢ a pound in October, 1941, and then in January, 1942, arranged jointly with OPM and Metals Reserve to pay any mine a premium price of 11¢ a pound for output in excess of quotas based on 1941; in February, 1943, premium prices in some cases were lifted to 16.5¢ a pound.

U. S. MINE OUTPUT DECLINING

These measures helped to offset the decline in zinc mining in the important Tri-State Area (Missouri, Kansas, and Oklahoma) where ore reserves are giving out. But overall U.S. production—due largely to a shortage of mine labor—is down about 6% from the 1942 peak:

Mine Output of Recoverable Zinc

	Central States*	Total Output
	(000's of short tons)	
1939....	232	584
1940....	245	665
1941....	276	749
1942....	258	768
1943....	223	712
1944....	200	714

*Includes Tri-State Area

To supplement domestic production, the United States—through the Board of Economic Warfare and Metals Reserve—made contracts and gave technical assistance to properties in the Western Hemisphere, and imports of ore and concentrates rose from 33,500 tons in 1939 to 268,000 in 1942, and 464,000 this year.

About 55% of the imports come by rail—35% from Mexico and 20% from Canada; the remainder comes by sea from Australia, Argentina, Peru, Newfoundland, Bolivia, and Belgian Congo.

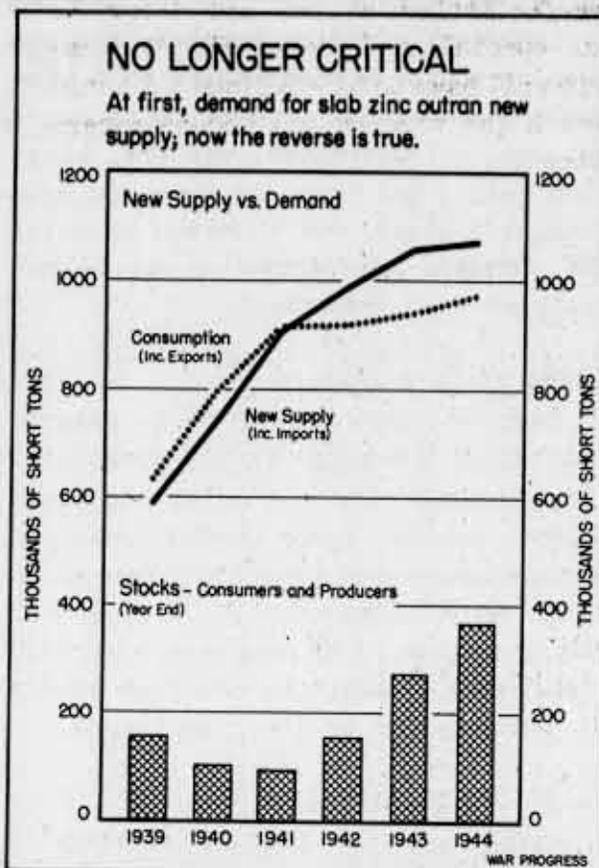
About 10% of total zinc ores wind up as zinc oxide (used chiefly in pigments, rayon, rubber, and chemical warfare) and zinc dust (utilized in numerous chemical processes). The remainder is needed for slab zinc, of which there are six grades. The best grade is used for ammunition brass (one of the earliest bottlenecks in the war program); demands for Special High-Grade slab zinc were so great during 1941 and 1942 that lower grades had to be reprocessed to meet top-grade standards. And smelter capacity had to be increased about 25%. Slab zinc output nearly doubled since 1939, viz. (thousands of tons):

	Slab Zinc Output			Total
	Primary	Secondary	Imports	
1939...	507	50	31	588
1940...	675	49	17	741
1941...	822	60	35	917
1942...	892	53	36	981
1943...	960	35	59	1,054
1944...	960	35	73	1,068

The supply and requirements situation for 1943 and 1944 stacks up as follows:

Zinc Balance Sheet (000's of tons)			
Requirements	1943	1944	
Foreign.....	92	23	
Brass mills.....	413	480	
Steel mills.....	183	200	
Other galvanizers..	73	80	
Other uses.....	178	184	
Total.....	940	972	
Total supply.....	1,054	1,068	

Allowing for an inventory adjustment this year, 102,000 tons will be added



to stocks for 1943, and 96,000 tons next year, bringing slab zinc stocks at the end of 1944 to more than 280,000 tons. And to these stocks should be added expected accumulations in zinc ores and concentrates, which would bring the total supply at the end of 1943 to 346,000 tons of recoverable zinc, and to 558,000 tons at the end of 1944—a four and seven months' supply, respectively. At the end of July, 1943, total stocks stood at 196,000 tons, or two months' supply.

NO PRODUCTION CUT PLANNED

As a consequence of the easier supply-demand position and the overall labor shortage, two weeks ago the Zinc Division decided against paying more than 11¢ a pound to bring in new production from mines not now operating. However, there are no plans thus far to cut production, nor to widely increase the use of zinc

as a substitute for other metals.

Important civilian inroads into the surplus would be contingent on a wide scale resumption of production of automobiles, refrigerators, washers, bicycles, etc.; and that, in turn, is contingent on steel. But this can be said: the present zinc situation would not restrict such resumption.

LABOR STILL A PROBLEM

Even so, there will be no general letdown of the bars. First, unexpected foreign needs for the metal might develop. Second, labor in the mines and smelters continues to be a problem, which means an adequate supply of zinc over coming months is by no means assured—right now two smelters are down to 50% of capacity due to labor shortages.

OBJECTIVE WITHIN REACH

Meanwhile, the present problem is the attainment of previously set stockpile objectives, even though the outlook for reaching the goal is more favorable than ever before, and is becoming increasingly favorable, actually and statistically (chart, page 9).

War Progress Notes

WESTERN HEMISPHERE DEBUT

THE LANCASTER, famed British 4-engined night bomber, made its debut on this side of the Atlantic, last month. One came off the assembly line as against two scheduled. The debut originally had been planned for April.

The Lancaster weighs 38,000 lbs., slightly heavier than the Flying Fortress (34,000 lbs.) and the Liberator (36,000 lbs.). Used almost exclusively as a night bomber, it is less heavily armed and armored than the Liberators and Forts and carries a much bigger bomb load. Seventeen more Lancasters are due

to come off the Canadian line this year, with 261 scheduled for 1944. Initial delivery of the transport version of this plane—the York—is due this month, two by year-end, and 31 during 1944.

AIRCRAFT BUSINESS PRIMER

AFTER GERMANY attacked Poland on September 1, 1939, Britain, France, the Netherlands, and other foreign governments sought out U.S. manufacturers for airplanes and equipment. Such contracts amounted to \$1,360,000,000, and virtually all of them have been completed. England, which took over French orders when France fell in June, 1940, was the biggest buyer, accounting for 86% of the total:

Great Britain ...	\$1,166,000,000
Netherlands	91,000,000
Canada	91,000,000
Australia	9,600,000
China	2,000,000
South Africa	70,000
Total	\$1,359,670,000

These orders look small in relation to what has been done. (Deliveries of aircraft and related equipment in 1942, alone, totaled \$10,100,000,000; more than \$13,000,000,000 in the first eight months of 1943.) But they were a major factor in getting the industry started.

REPORTS ON REPORTS

Anthracite Shortage

Anthracite production in 1943 may fall 5,000,000 tons short of the 67,000,000 tons required, because of insufficient labor. *Labor Market Problems in the Anthracite Coal Industry* (confidential; pp. 12) suggests: (1) the 48-hour week, where feasible, (2) referral of new workers to the most potentially productive fields, and (3)

SELECTED MONTHLY STATISTICS

Production - Hours and Earnings - Transportation

	Latest Month *	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Same Month 1939	Same Month 1937
PRODUCTION INDEX - INDUSTRIAL (1935-39=100) [†]	207 ^p	205	203	197	187	106	119
Total Manufactures	218 ^p	217	218	211	196	108	119
Durable	307 ^p	303	304	292	260	105	131
Nondurable	146 ^p	147	148	146	144	110	109
Minerals	143 ^p	141	122	122	136	94	120
AVERAGE HOURLY EARNINGS (Cents)							
All Manufacturing Industries	96.3 ^p	95.9 ^p	95.3	91.9	85.6	62.6	N.A.
Durable Goods	106.1 ^p	105.4 ^p	105.0	101.7	94.9	69.1	N.A.
Nondurable Goods	80.6 ^p	80.4 ^p	79.6	76.8	72.5	37.1	N.A.
Bituminous Coal Mining	115.0 ^p	112.4 ^p	112.0	108.5	105.3	89.2	88.1
Metalliferous Mining	98.7 ^p	98.3 ^p	98.4	94.1	89.1	68.8	71.2
AVERAGE HOURS PER WEEK							
All Manufacturing Industries	44.4 ^p	45.2 ^p	45.2	44.2	42.6	36.8	N.A.
Durable Goods	46.0 ^p	46.8 ^p	46.9	45.9	44.8	36.4	N.A.
Nondurable Goods	42.2 ^p	42.8 ^p	42.8	41.8	39.8	37.1	N.A.
Bituminous Coal Mining	37.1 ^p	28.4 ^p	35.2	34.7	30.5	24.4	25.0
Metalliferous Mining	43.6 ^p	44.9 ^p	44.3	43.3	42.1	36.4	42.4
TRANSPORTATION - COMMODITY AND PASSENGER (1935-39=100) [†]							
Commodity	223 ^p	214	210	187	185	104	113
Commodity	208 ^p	196	199	176	184	103	114
Passenger	273 ^p	270	247	221	189	108	100

* Production, August; Hours and Earnings, Transportation, July.

† Unadjusted; n.a. not available; p. preliminary

transfer of miners from southern to harder-hit northern fields.

(War Manpower Commission, Reports and Analysis Service)

Food for Crops

An increase in gross fertilizer requirements to 11,300,000 tons is anticipated in the 1943-44 season, but *Fertilizers* (confidential; pp. 13) indicates that a shortage of sulphuric acid and the decreasing labor supply may hinder the output of superphosphate, production of which has increased 86% since 1938-39.

(Department of Commerce, Bureau of Foreign and Domestic Commerce)

Wanted: A Million Women

Although the increase in employment of women in nonagricultural industries during the past year almost balanced

the decrease in male employment, and the number of women at work in agriculture was at a record high, much of the gain was due to the employment of students during the summer months. The return of students to school will probably wipe out a considerable part of the recent gain, according to *Women in the Wartime Labor Market* (pp. 17). The 1,000,000 new women which need to be added to the nation's labor force must come chiefly from housewives without child-care responsibilities—and a variety of factors may make the goal extremely difficult to attain.

(War Manpower Commission, Reports and Analysis Service)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

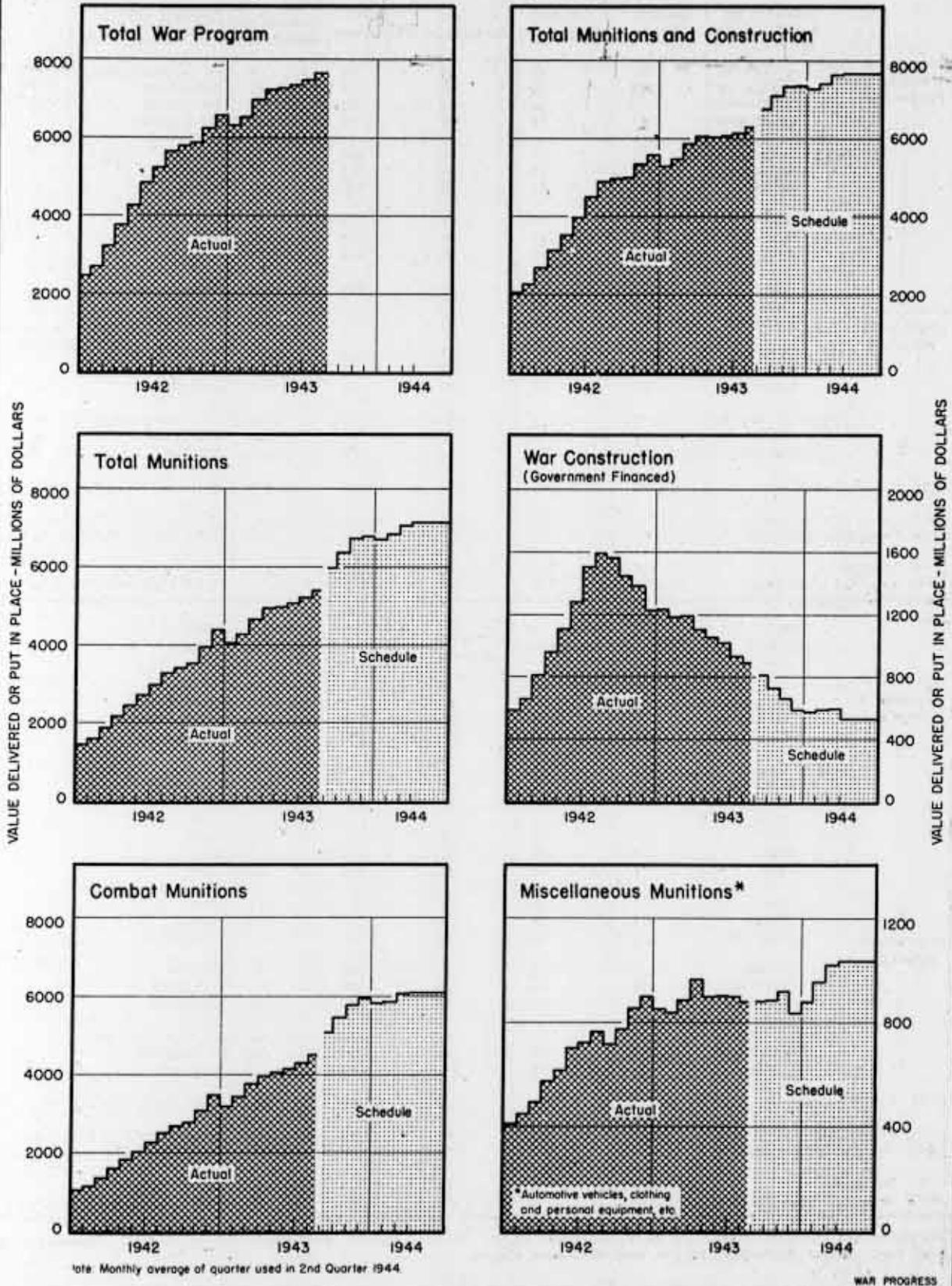
CONFIDENTIAL

PRODUCTION PROGRESS									
General Summary (Value of production, in millions of dollars)									
	MONTH OR MONTHLY AV	Total Program	Total Munitions & Construction	Total Munitions	War Construction (Govt Financed)	Miscel. Munitions	MONTH OR MONTHLY AV		
Valuation of Actual Production	1942 - 1st Quarter	\$ 2,790	\$ 2,328	\$ 1,648	\$ 681	\$ 453	1st Quarter - 1942	Valuation of Actual Production	
	2nd Quarter	4,233	3,554	2,440	1,114	629	2nd Quarter		
	3rd Quarter	5,557	4,780	3,223	1,557	735	3rd Quarter		
	4th Quarter	6,220	5,305	3,954	1,351	840	4th Quarter		
	1943 - January	6,307	5,279	4,045	1,234	853	January - 1943		
	February	6,519	5,460	4,274	1,186	836	February		
	March	6,987	5,854	4,662	1,192	882	March		
	April	7,236	6,053	4,953	1,100	962	April		
	May	7,245	6,007	4,957	1,050	896	May		
	June	7,364	6,060	5,046	1,014	898	June		
	July	7,481	6,136	5,202	934	896	July		
	August	7,672	6,285	5,397	868	879	August		
Valuation of Schedules	September		6,788	5,978	810	881	September	Valuation of Schedules	
	October		7,099	6,371	728	886	October		
	November		7,368	6,714	654	919	November		
	December		7,370	6,781	589	836	December		
	1944 - 1st Quarter		7,448	6,861	587	951	1st Quarter - 1944		
	2nd Quarter		7,673	7,138	535	1,034	2nd Quarter		
	2nd Half		7,364	6,867	497	896	2nd Half		
	1942 Actual Production			47,902	33,793	14,109	7,974		1942 Actual Production
	1943 Actual plus Schedule			75,759	64,380	11,379	10,624		1943 Actual plus Schedule
	1943 Required Production			77,193	65,814	11,379	10,777		1943 Required Production
	1944 Schedule			89,545	83,195	6,350	11,330		1944 Schedule
	1944 Required Production			89,186	82,836	6,350	11,340		1944 Required Production
Valuation of Actual Production	1942 - 1st Quarter	\$ 1,195	\$ 515	\$ 279	\$ 300	\$ 100	1st Quarter - 1942	Valuation of Actual Production	
	2nd Quarter	1,811	740	475	431	164	2nd Quarter		
	3rd Quarter	2,487	953	728	587	220	3rd Quarter		
	4th Quarter	3,113	1,174	950	738	251	4th Quarter		
	1943 - January	3,192	1,290	896	723	283	January - 1943		
	February	3,438	1,374	955	792	317	February		
	March	3,780	1,526	1,021	893	340	March		
	April	3,991	1,625	1,066	922	378	April		
	May	4,061	1,714	1,038	945	364	May		
	June	4,148	1,757	1,065	922	404	June		
	July	4,306	1,820	1,117	977	392	July		
	August	4,518	1,961	1,241	1,035	381	August		
Valuation of Schedules	September	5,097	2,277	1,184	1,190	446	September	Valuation of Schedules	
	October	5,485	2,471	1,298	1,249	467	October		
	November	5,795	2,628	1,425	1,274	468	November		
	December	5,945	2,740	1,445	1,305	455	December		
	1944 - 1st Quarter	5,910	2,881	1,297	1,278	454	1st Quarter - 1944		
	2nd Quarter	6,104	3,118	1,257	1,266	464	2nd Quarter		
	2nd Half	5,970	3,180	1,086	1,185	519	2nd Half		
	1942 Actual Production		25,819	10,148	7,296	6,169	2,206		1942 Actual Production
	1943 Actual plus Schedule		53,756	23,183	13,651	12,227	4,695		1943 Actual plus Schedule
	1943 Required Production		55,037	22,970	14,177	13,195	4,695		1943 Required Production
	1944 Schedule		71,865	37,077	14,176	14,742	5,870		1944 Schedule
	1944 Required Production		71,496	37,910	13,799	13,917	5,870		1944 Required Production

Schedules and required production as of September 10 for Aircraft; as of August 1 for War Construction and selected aircraft items; as of September 1 for all others. (a) Aircraft and Aircraft Munitions; Naval Vessels, Ordnance and Equipment; Army Auxiliaries; Merchant Vessels and Maintenance. (b) Ground Army Ordnance, Signal, and Related Equipment.

PRODUCTION PROGRESS

General Summary - Munitions, Construction, Miscellaneous



PRODUCTION PROGRESS

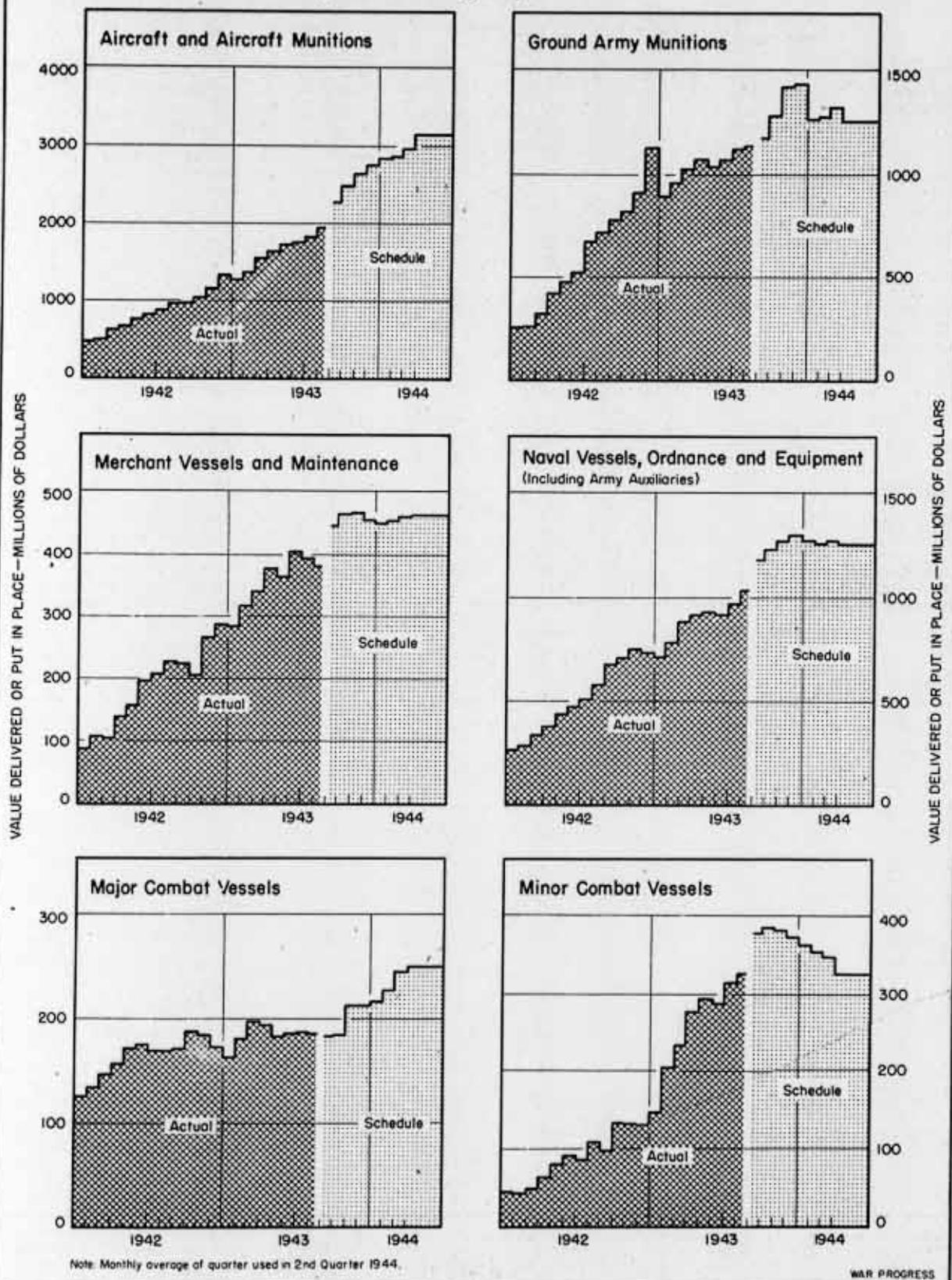
General Summary (Value of production, in millions of dollars)

		MONTH OR MONTHLY AV.	Combat Planes	Aircraft Armament	Aircraft Ammunition	Artillery & Equipment	Artillery & Tank Cannon Ammunition	MONTH OR MONTHLY AV.		
Valuation of Actual Production	1942 -	1st Quarter	\$ 180	\$ 19	\$ 34	\$ 21	\$ 48	1st Quarter - 1942	Valuation of Actual Production	
		2nd Quarter	233	29	46	31	81	2nd Quarter		
		3rd Quarter	294	30	62	55	102	3rd Quarter		
		4th Quarter	367	38	76	95	109	4th Quarter		
	1943 -	January	361	38	88	105	95	January - 1943		
		February	442	38	80	123	87	February		
		March	513	41	76	120	107	March		
		April	575	42	91	126	95	April		
		May	647	41	88	113	104	May		
		June	670	42	90	101	118	June		
	Valuation of Schedules	July	709	43	95	101	103	July		
		August	772	45	119	109	106	August		
September		866	41	131	111	115	September			
1944 -	October	1,055	42	137	118	160	October	Valuation of Schedules		
	November	1,125	41	154	128	202	November			
	December	1,189	42	145	126	251	December			
	1st Quarter - 1944	1,219	39	159	97	235	1st Quarter - 1944			
1944 -	2nd Quarter	1,298	39	154	87	237	2nd Quarter			
	2nd Half	1,406	36	102	82	220	2nd Half			
1942 Actual Production			3,221	349	653	603	1,020	1942 Actual Production		
1943 Actual plus Schedule			8,924	496	1,294	1,381	1,543	1943 Actual plus Schedule		
1943 Required Production			8,924	473	1,437	1,384	1,619	1943 Required Production		
1944 Schedule			15,990	452	1,548	1,044	2,737	1944 Schedule		
1944 Required Production			15,990	505	1,570	1,019	2,671	1944 Required Production		
		MONTH OR MONTHLY AV.	Antiaircraft Guns & Equip.	Antiaircraft Ammunition	Small Arms & Infantry Weapons	Small Arms & Infantry Weapon Ammunition	Combat Vehicles	MONTH OR MONTHLY AV.		
Valuation of Actual Production	1942 -	1st Quarter	\$ 19	\$ 12	\$ 17	\$ 42	\$ 105	1st Quarter - 1942	Valuation of Actual Production	
		2nd Quarter	42	22	30	82	147	2nd Quarter		
		3rd Quarter	79	32	39	121	209	3rd Quarter		
		4th Quarter	101	18	51	146	288	4th Quarter		
	1943 -	January	119	21	56	175	206	January - 1943		
		February	119	16	56	171	251	February		
		March	124	20	60	192	282	March		
		April	131	25	58	206	293	April		
		May	114	20	57	220	285	May		
		June	124	18	65	232	290	June		
	Valuation of Schedules	July	112	16	64	251	317	July		
		August	117	24	64	240	298	August		
September		123	30	71	242	273	September			
1944 -	October	132	38	77	266	251	October	Valuation of Schedules		
	November	135	42	83	281	262	November			
	December	135	47	86	287	230	December			
	1st Quarter - 1944	107	53	69	305	204	1st Quarter - 1944			
1944 -	2nd Quarter	91	58	68	308	182	2nd Quarter			
	2nd Half	73	48	55	288	159	2nd Half			
1942 Actual Production			722	254	410	1,169	2,249	1942 Actual Production		
1943 Actual plus Schedule			1,485	317	797	2,763	3,238	1943 Actual plus Schedule		
1943 Required Production			1,487	425	822	2,874	3,489	1943 Required Production		
1944 Schedule			1,034	622	740	3,569	2,115	1944 Schedule		
1944 Required Production			1,029	568	723	3,584	1,899	1944 Required Production		

Schedules and required production as of September 16 for Aircraft; as of September 1 for ASF items. Schedules are used for required production in the case of combat planes.

PRODUCTION PROGRESS

Selected Items—Aircraft, Ground Army, Ships



PRODUCTION PROGRESS

General Summary (Value of production, in millions of dollars)

MONTH OR MONTHLY AV.		Battleships, Cruisers & Carriers	Destroyers	Submarines	Antisubmarine Vessels	Transports (Navy & Maritime)	MONTH OR MONTHLY AV.	
Valuation of Actual Production	1942 - 1st Quarter	\$ 60	\$ 59	\$ 17	\$ 43	\$ 1	1st Quarter - 1942	Valuation of Actual Production
	2nd Quarter	73	75	20	77	6	2nd Quarter	
	3rd Quarter	71	77	23	96	10	3rd Quarter	
	4th Quarter	79	81	23	128	13	4th Quarter	
Valuation of Schedules	1943 - January	68	70	25	144	11	January - 1943	Valuation of Schedules
	February	76	76	29	205	18	February	
	March	96	73	29	229	12	March	
	April	85	83	27	273	15	April	
	May	78	72	33	291	13	May	
	June	78	78	31	285	12	June	
	July	77	80	32	314	15	July	
	August	83	72	32	325	16	August	
	September	79	73	33	375	23	September	
	October	91	62	33	380	23	October	
	November	92	83	36	377	23	November	
	December	93	81	37	368	24	December	
Valuation of Schedules	1944 - 1st Quarter	102	88	40	350	23	1st Quarter - 1944	Valuation of Schedules
	2nd Quarter	108	96	47	323	27	2nd Quarter	
1944 - 2nd Half		118	96	50	263	34	2nd Half	
1942 Actual Production		850	876	249	1,031	92	1942 Actual Production	
1943 Actual plus Schedule		996	903	377	3,566	205	1943 Actual plus Schedule	
1943 Required Production		963	983	406	3,961	193	1943 Required Production	
1944 Schedule		1,338	1,130	561	3,595	150	1944 Schedule	
1944 Required Production		1,335	1,043	568	3,462	142	1944 Required Production	

MONTH OR MONTHLY AV.		Landing Vessels	Industrial Facilities	Aircraft Fields & Bases	Clothing & Personal Equip.	Automotive Vehicles & Equip.	MONTH OR MONTHLY AV.	
Valuation of Actual Production	1942 - 1st Quarter	\$ 2	\$ 352	\$ 50	\$ 98	\$ 134	1st Quarter - 1942	Valuation of Actual Production
	2nd Quarter	7	512	108	142	184	2nd Quarter	
	3rd Quarter	84	662	219	178	211	3rd Quarter	
	4th Quarter	141	639	169	203	193	4th Quarter	
Valuation of Schedules	1943 - January	80	613	113	221	173	January - 1943	Valuation of Schedules
	February	67	577	114	208	181	February	
	March	91	566	111	227	204	March	
	April	49	487	113	211	227	April	
	May	67	456	117	186	234	May	
	June	62	418	107	163	241	June	
	July	71	372	92	172	262	July	
	August	80	329	85	164	256	August	
	September	97	288	79	149	246	September	
	October	104	249	69	144	251	October	
	November	107	215	61	156	248	November	
	December	109	180	55	154	219	December	
Valuation of Schedules	1944 - 1st Quarter	113	188	57	98	268	1st Quarter - 1944	Valuation of Schedules
	2nd Quarter	107	175	52	99	293	2nd Quarter	
1944 - 2nd Half		103	158	50	106	289	2nd Half	
1942 Actual Production		702	6,492	1,640	1,864	2,168	1942 Actual Production	
1943 Actual plus Schedule		984	4,750	1,116	2,155	2,742	1943 Actual plus Schedule	
1943 Required Production		932	4,750	1,116	2,037	2,829	1943 Required Production	
1944 Schedule		1,279	2,035	625	1,226	3,416	1944 Schedule	
1944 Required Production		1,086	2,035	625	1,306	3,189	1944 Required Production	

Schedules and required production as of August 1 for War Construction; as of September 1 for all others. Estimates for Aircraft Fields and Bases exclude overseas military construction. Schedules are used for required production in all cases except Clothing and Personal Equipment, and Automotive Vehicles and Equipment.

CONFIDENTIAL

The President

1

WAR PROGRESS

Confidential
(British Secret)

DECLASSIFIED
E.O. 11652, Sec. 3(E) and 6(D) or (G)
Commeros Dept. Letter, 11-16-72
By RHP, Date MAR 29 1973

September Production "Slow"

Scorecard on Merchant Shipping

Number 160

October 9, 1943

Relapse After August's 4% Rise

Munitions output barely manages to hold own; prospects of achieving \$62,000,000,000 volume this year go glimmering; we're pushing the ceiling.

AFTER the 4% gain from July to August, munitions production last month faltered. Output at \$5,400,000,000 (preliminary) was the same as in August.

Construction declined, as programmed. And the aggregate value of munitions output and war construction amounted to \$6,200,000,000, or 1% below August.

September's performance re-emphasizes the difficulty of realizing substantial successive month-to-month increases. The slack, out of which the sharp gains of 1942 were fashioned, has been taken up.

MANPOWER CHIEF DRAG

There's always something to gum the works. In some plants it will be design changes; in others failure of parts or materials to arrive on time, or defective parts; in still others, it's management—in one case last month disarranged distribution of parts to the assembly line cost more than 100 planes. And of late, the most common complaint has been labor. Moreover, plants that fail to come close to schedule vary from month to month. In airplanes in July, for instance, Curtiss was a big laggard. Last month Bell and North American plants fell behind the procession. The very diversity of the problems indicates that production is pushing the ceiling.

In several items failure to meet schedule may have anticipated prospective or recent cutbacks in programs—tanks and motor torpedo boats, for in-

stance. This also militates against big month-to-month gains.

Whereas last year you could bet that a "slow" month would be followed by a rebound, this year the gains have been hesitant, as the following table shows:

	Gain Over Previous Month	
	Dollars	%
April.....	\$291,000,000	6%
May.....	—	Nil
June.....	89,000,000	2
July.....	156,000,000	3
August.....	195,000,000	4
September.....	—	Nil

The plateau in September—it can be called another plateau—puts a new perspective on the year. For several months now, the possibility of getting \$65,000,000,000 of munitions has been abandoned; and WAP PFCPFSS had estimated that perhaps \$62,000,000,000 might be achieved, and "would take doing" (WP-Aug 14 '43, p1). Even to attain that \$62,000,000,000 total, gains from here on would have to average \$315,000,000 a month. In the light of past performance, you can judge for yourself how realizable that is.

Among major groups, only aircraft has managed to gain each month; indeed, aircraft has carried the program upward. But the gains have been erratically lower. And when this group does not gain much, then munitions production as a whole doesn't gain much.

Aircraft

Last month is the immediate case in point: Aircraft and aircraft munitions were up only 2%.

Airplane acceptances totaled 7,575

(excluding 23 Targets and Drones), only five more than in August. But heavy bombers met schedule and ran 6% ahead of August. As a result, output as a whole was up 3% on an airframe weight basis, although 8% under the W-7 (September 16) schedule. The August gain over July was 7%.

COAST PLANTS SNAP BACK

West Coast plants, which have been dogged persistently by labor shortages and design changes, snapped back a bit last month; their gain kept pace with plants in other areas. But for several months, West Coast production has been more or less on a plateau, in contrast with the sharp rise throughout the rest of the country (chart, page 6).

Two companies ran into hard sledding during September. At Bell in Buffalo, only 280 P-39 Airacobras were accepted, 40% under W-7. North American's two plants producing P-51 Mustangs lagged 23% behind W-7. At Inglewood it was labor shortages; at Dallas difficulties in launching a new model. The 80 Billy Mitchell (B-25) medium bombers turned out at that company's Inglewood plant, were 14% lower than expectations; this reflected continued work on the major

job of redesigning this plane as an attack bomber. And at Kansas City, the 54%-behind-schedule performance on the B-25 was partly attributable to the need for disassembling a number of engines that had rusted.

If all Bell and North American plants had measured up to expectations, the September deficit from schedule would have been 4% instead of 8%.

Flying Fortresses and Liberators again pushed into new high ground; the 944 accepted were 3% above August and actually seven planes more than called for by the W-7 schedule. Boeing's Seattle plant met expectations with 200 Fortresses, 10 above August. However, the 200-a-month level had previously been reached in May. This plant has been beset by labor shortages. And Ford at Willow Run had a banner month—the 149 Liberators accepted exceeded August by 33 planes and were 32% above plan.

Together with acceptances of 15 B-29 long range superbombers at Boeing's Wichita plant—five below schedule but 11 more than in August—heavy bombers represented the only major combat-plane group to meet schedule and exceed August, as the following table shows (airframe weight basis):

September Acceptances as % of

	August	W-7
All mil. planes...	103%	92%
Combat planes....	102	91
Heavy bombers....	106	100
Patrol bombers...	83	82
Medium bombers...	81	68
Light bombers....	115	92
Fighters (incl. nav. reconn.)...	104	92
Transports.....	109	84
Trainers.....	116	116
Communication.....	93	84

Two-engined bombers exceeded schedule, effecting the comeback in the A-20

IN THIS ISSUE:

RELAPSE AFTER AUGUST'S 4% RISE	1
INDUSTRIAL PRODUCTION INDEX	3
PRODUCTION PROGRESS PRELIMINARY	5
SCORECARD ON MERCHANT SHIPPING	7
LEND-LEASE REACHES TECHNICAL PEAK	9
1944'S BIG 10	10
KEY STATISTICS OF THE WEEK	11
TYPEWRITER RESUMPTION	12
WAR PROGRESS NOTES	13
REPORTS ON REPORTS	13
SELECTED MONTHLY STATISTICS	14
PRODUCTION PROGRESS (AIRCRAFT AND AIRCRAFT MUNITIONS)	15, 16

Boston at Douglas' Santa Monica plant, following a flock of design changes in July and August, and the 28% reduction in the September schedule.

It was pretty much the same story at Burbank, Calif. Scheduled output of the Lockheed Lightning (P-38) for September was cut 62%, and at the same time the assembly line began to recover from an August pile-up in design changes: 155 were accepted, 52% more than in the previous month and only one plane shy of the W-7 revision. But next month's production plan calls for a 168% step-up to 416.

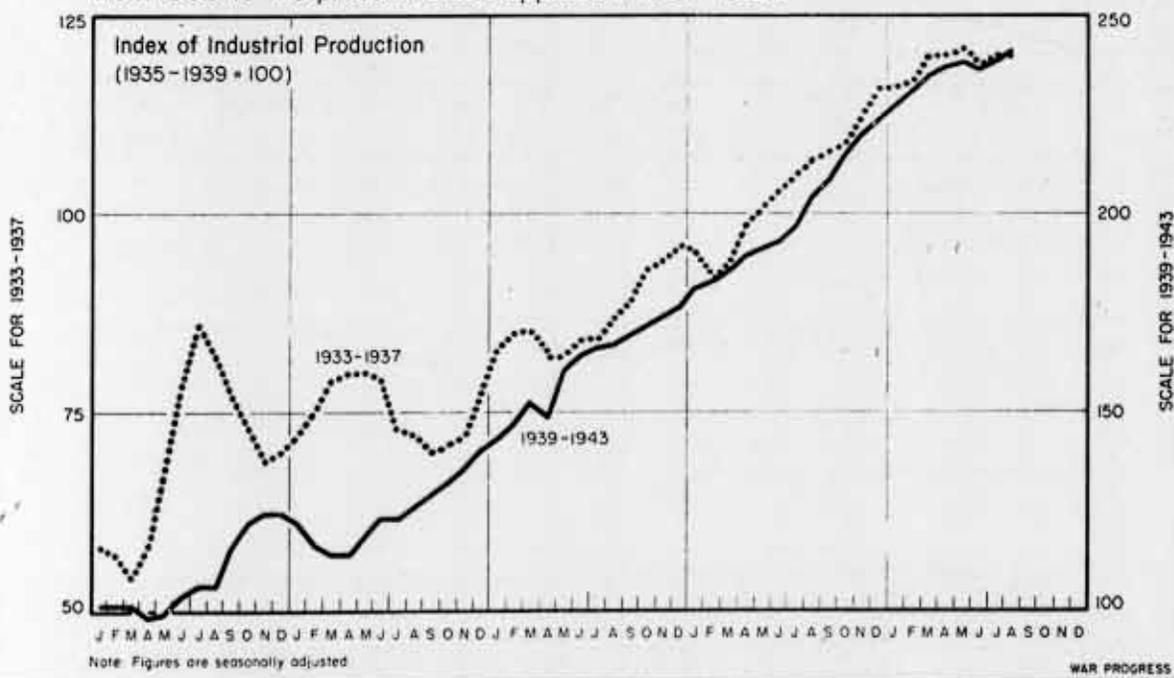
All Navy fighter plants were ahead of the preceding month with the excep-

tion of General Motors' Eastern Aircraft Division at Linden, assembling the FM Wildcat—the changeover from a Pratt & Whitney to a Wright engine brought a 6% slip under August to 159 planes. In only one other month, July, has this plant failed to score a monthly gain since Wildcat production began in September, 1942.

Douglas' Chicago plant finally got going on the 4-engined Skymaster transport (C-54); two were accepted against a schedule of three. At Curtiss, Buffalo, the two-engined Commando (C-46) moved off its 3-month plateau of 34 planes. But the 38 accepted were 46% below schedule. Design changes, based

YOU HAVE TO DO A LOT OF SEARCHING...

in modern U.S. industrial history to find a sustained production gain like the one from 1939 to the present. Close approach: 1933-1937.

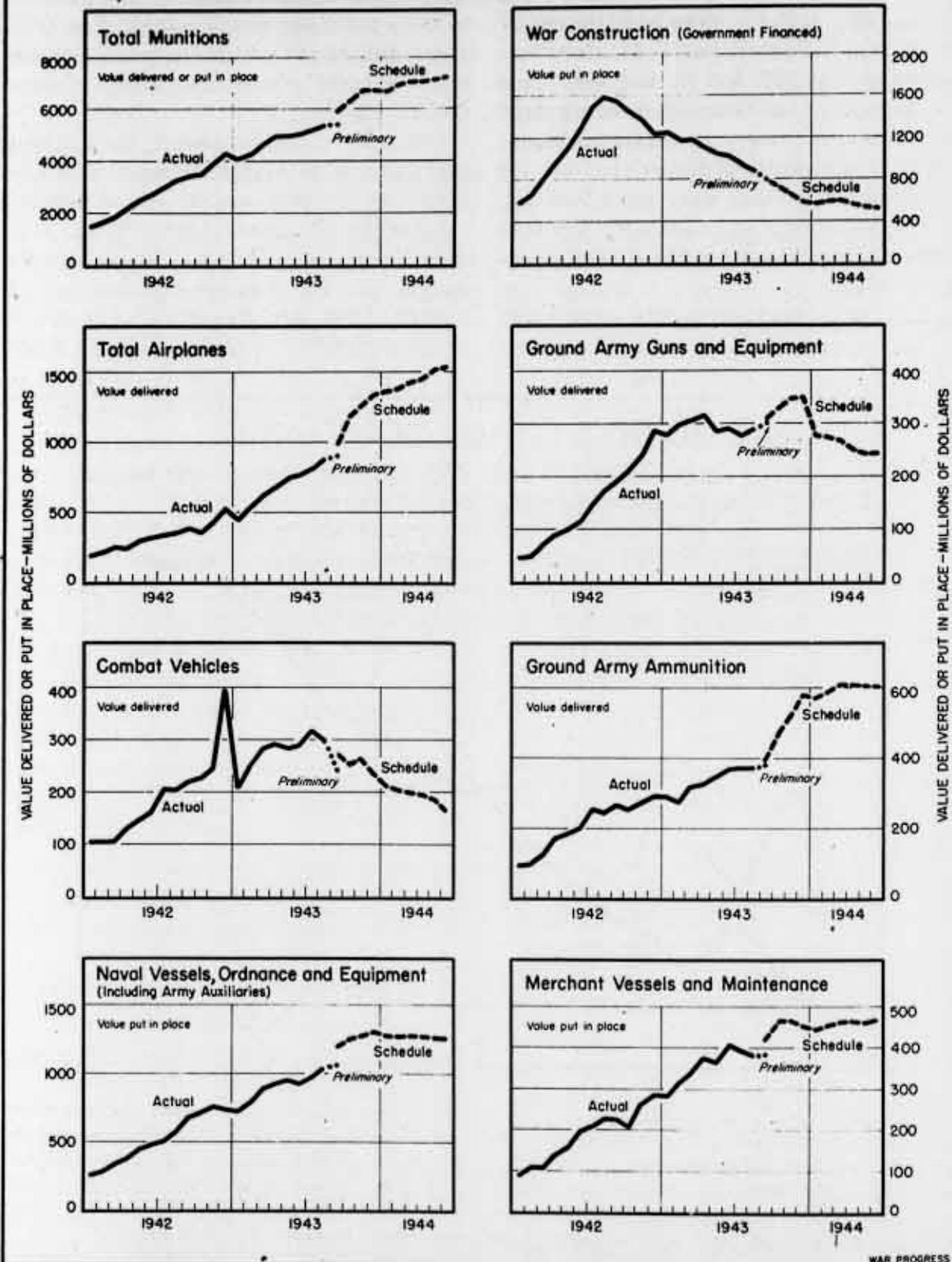


Looking back, the rise in industrial output which started in January, 1933, and stopped in the fall of 1937 seems tremendous. It began with some 13,000,000 persons unemployed, plants idle, and materials in oversupply. There was plenty of slack to take up. But the gain during

these recovery-from-depression years has been more than duplicated by the wartime expansion. Yet in the current upsurge, production commenced at a level almost double that of January, 1933, only 16% below the all-time peak of May, 1937, and only 11% below the 1929 high.

MUNITIONS OUTPUT HOLDS AT AUGUST LEVEL

Airplanes, naval and merchant ships show slight gains which are offset by a drop in combat vehicles and miscellaneous munitions.



on first reports from use in the field, have slowed up output of this transport.

In the aircraft ordnance group, bomb production was especially high, topping August levels by 23% and schedule by 14%. Virtually all types exceeded August rates and the 1,000- and 2,000-pound types went considerably over schedule. This is the second successive month of over-schedule bomb output.

Army Ordnance

Army ordnance continues to move along on a \$1,000,000,000-a-month plateau. September production missed schedule by 4% and held level with August. Summed up, this is what happened: Ammunition rose about 5%, as planned, but the slow-down in equipment was greater than scheduled. This last was due chiefly to a faster falling off in M4 tank production than forecast. Of the 1,850 M4s scheduled, only 1,570 came off the lines.

Essentially, this speeds up by one month the cut in monthly tank rates.

Production of the light M3 tank was closed out with the acceptance of the last 47 units. Acceptances of 1,300 armored cars were 400 higher than in any previous month, but, due to the lag in the medium type, fell 50 units behind schedule. The new light cargo carrier T-24, a full-track vehicle, was strong, 400 produced against 300 scheduled.

Among self-propelled guns the important 76mm. piece met only 74% of its sharply rising schedule. Other types were on schedule. All types of wheeled artillery met or moderately bettered their September goal.

All of the three principal shoulder weapons—the Garand (112,000 produced), the carbine (332,000), and the Springfield M1903 (89,000)—hit new highs.

Ground ammunition loadings were up 3%, though a 5% rise over August was

PRODUCTION PROGRESS - Preliminary

Value delivered or put in place - millions of dollars.

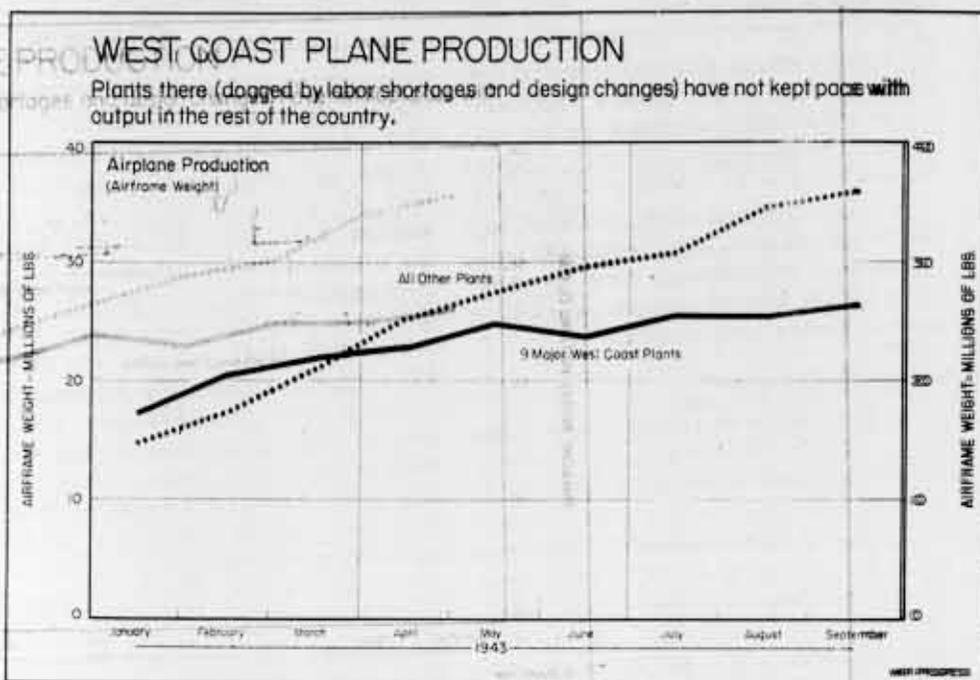
	September Preliminary	August Actual	% Change	September Schedule*	% Deviation Sept. Prelim vs. Schedule
TOTAL MUNITIONS AND WAR CONSTRUCTION	\$ 6,200	\$ 6,274	- 1 %	\$ 6,778	- 9 %
TOTAL MUNITIONS	5,400	5,397	0	5,978	-10
Aircraft and Aircraft Munitions	2,010	1,961	+ 2	2,277	-12
Airplanes, Spares, Equip. and Maint., etc.	1,686	1,656	+ 2	1,948	-13
Aircraft Ordnance	175	164	+ 7	172	+ 2
Aircraft Signal Equipment	149	141	+ 6	157	- 5
Ground Army Munitions	1,110	1,141	- 3	1,124	- 6
Combat Vehicles and Equipment	262	318	-18	294	-11
Guns and Equipment (a)	300	290	+ 3	305	- 2
Army Ammunition	380	370	+ 3	387	- 2
Ground Signal Equipment	168	163	+ 3	198	-15
Naval Vessels, Ordnance and Equipment (incl Army Auxiliaries)	1,065	1,035	+ 3	1,190	-11
Merchant Vessels and Maintenance	385	381	+ 1	446	-14
Miscellaneous Munitions	830	879	- 6	881	- 6
WAR CONSTRUCTION (Government Financed)	800	877	- 9	800	†

* As of August 1 for War Construction; as of September 16 for Aircraft and Spares; as of September 1 for all others.

(a) Artillery and equipment; antiaircraft guns and equipment; small arms and infantry weapons.

† Schedule used for preliminary.

THIS DOCUMENT IS THE BEST AVAILABLE. EVERY TECHNICAL EFFORT HAS BEEN TAKEN TO INSURE LEGIBILITY.



scheduled. In artillery and tank gun ammunition the gain over August was 9% and was concentrated wholly in high explosive types. Output of armor piercing shot was 6% below August. Antiaircraft ammunition lagged—perhaps in line with the prospective cutback in the AA gun program.

Loading of ammunition for small arms and infantry weapons, although on schedule, remained for the second successive month on a plateau below the level attained in July.

Signal Equipment

After recording substantial gains during both July and August, signal equipment output slowed up last month. Preliminary data indicate that total acceptances of air, ground, and ship signal devices were just 4% ahead of August. This was 10% behind schedule. However, the schedules in this group

have been set at ambitiously high levels.

Ground radios, excluding combat vehicles, made only 85% of schedule. A 21% increase over August was called for. Two important ground-to-air sets, SCR-168 and SCR-615 reached only 27% and 29%, respectively, of schedule.

Aircraft signal equipment showed an increase of less than 1% over August, but was only 4% below schedule. Production of SCR-578, an airborne sea rescue set, reached only 38% of schedule and 56% of August production.

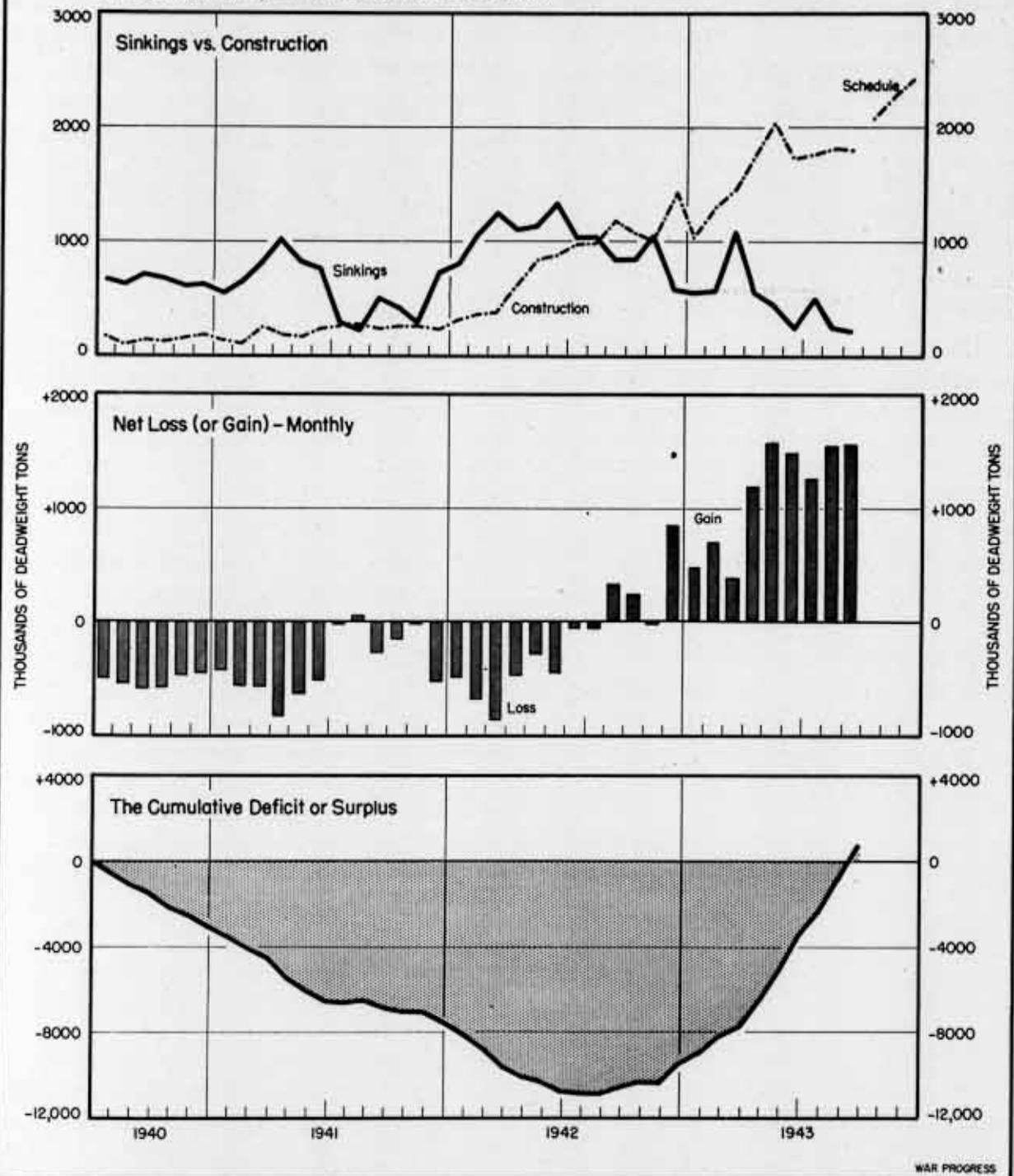
Combat vehicle radio acceptances were 8% greater than in August and 93% of schedule. Production in this category was still substantially below July.

Naval Ships

The estimated value of work done on naval vessels (including naval ordnance and equipment, and army auxiliaries) scored another increase last month—to

SCORECARD ON MERCHANT SHIPPING

United Nations merchant fleet is at the highest level since June, 1940, as net additions in September wipe out the cumulative deficit.



The United Nations merchant fleet is now back to where it was in June, 1940—and then some. The entire tonnage loss in over three years has been more than wiped out by new construction, in which the expansion in U.S. building

has been the primary factor. Domestic completions of merchant ships have risen from some 70,000 deadweight tons per month in Pearl Harbor days to nearly 1,700,000 today—a more-than-twentyfold increase.

\$1,065,000,000, or 3% higher than August; however, deliveries of naval ships fell 23% below the preceding month to 219,600 displacement tons (preliminary), and failed to make the first-of-the-month schedule by 10%:

	Deliv- eries (tons)	% Change from August	% Change from Schedule
Major combats	35,800	-53%	-4%
Minor combats	105,000	-19	-4
Landing ves.	66,800	+16	nil
Aux. & Trans.	12,000	-44	-61
Total	219,600	-23%	-10%

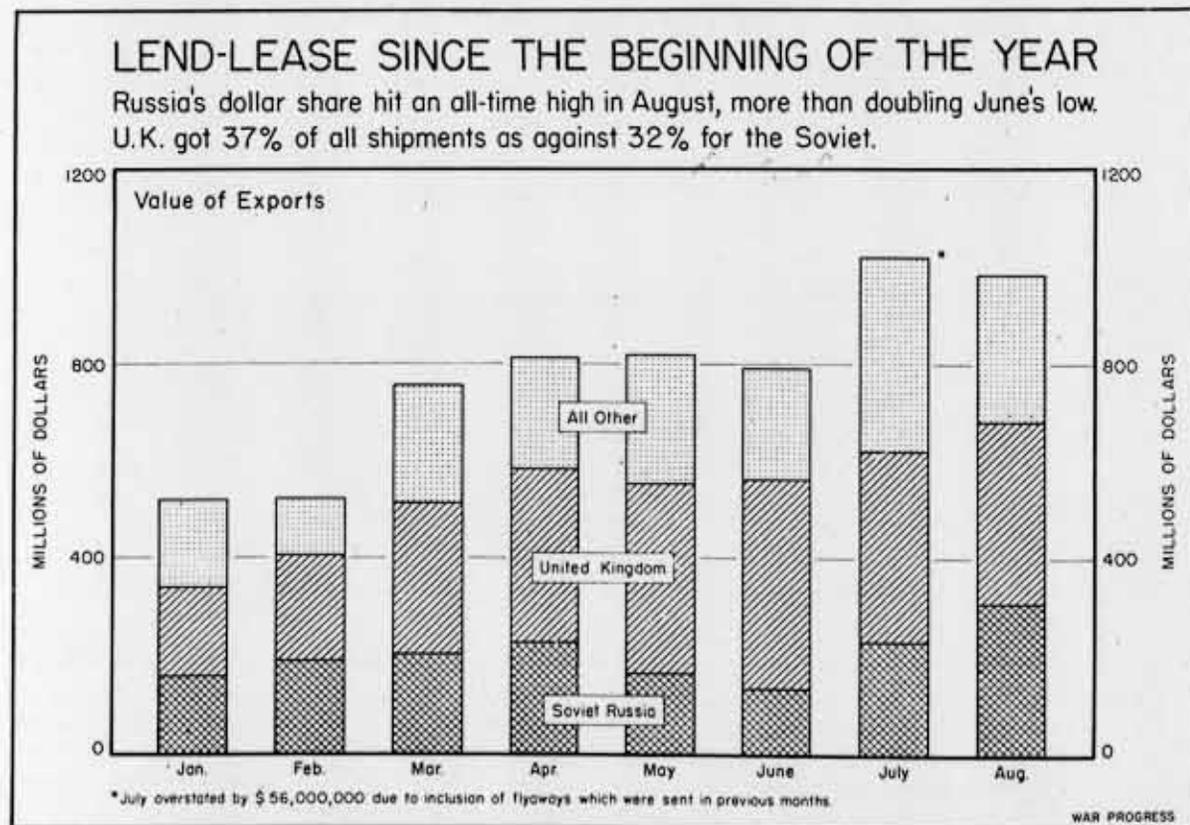
Almost one-fourth of all September tonnage was accounted for by destroyer escorts. The 40 delivered were four more than August and schedule and set another new high. Aircraft carrier escorts were right on schedule with four vessels (seven were delivered in the preceding month).

Motor torpedo boats, (PTs, BPTs, and RPTs) continued a decline that began in June; the 18 delivered were one below August, 12 under schedule, and the lowest since October 1942.

Merchant Ships

For the fourth month in a row, merchant ship deliveries lagged behind the first-of-the-month schedule; 155 vessels totaling 1,656,000 deadweight tons were completed, three fewer than the goal. Since June, deliveries have lagged behind schedule as follows:

	Deliveries (000 dwt. t.)	% Deficit from first-of-month Schedule
June.....	1,664	4%
July.....	1,660	3
August.....	1,682	4
September.....	1,656	1



Through September, deliveries of major-type merchant vessels totaled 13,200,000 deadweight tons, or 69% of the 1943 schedule of 19,162,000 deadweight tons. In order to achieve that, deliveries over the remainder of the year must average about 2,000,000 tons a month; since June, the average rate has been 1,600,000 tons.

On a work-put-in-place basis (preliminary), the September gain over August was 1%; here too the schedule was missed (table, page 5).

Liberty ship completions ran to 106, four below August and one above schedule. During the month, the 11-way yard of the Oregon Shipbuilding Corporation in Portland, delivered 24 Liberties—

a new record. Only seven standard-type vessels were delivered against a schedule of 11 (15 were completed in the preceding month).

EMERGENCY TANKER

The tanker program made another new high with deliveries of 22 vessels, right on schedule. During the month, the emergency tanker made its debut as scheduled: eight were delivered. This vessel has an estimated building period (keel laying to delivery) of two months, compared with six to 10 months for the standard tanker. It is also smaller—10,800 deadweight tons, against 16,600 to 18,400. Two aircraft transports came through as scheduled.

Lend-Lease Reaches Technical Peak

Shipments to Soviet Russia, both in dollar value and tonnage, also are at an all-time high. Industrial products, for recaptured areas, bulk large.

LEND-LEASE shipments to Russia reached a new all-time high in August, amounting to \$313,000,000; an \$83,000,000 gain over July, and two and one-half times the low June total, which was unduly depressed by the shipment of low-value heavy-tonnage goods—especially oil. In tonnage, exports to Russia also were at a new peak—522,000 tons as against 331,000 in July—and constituted 17.7% of the total, as compared to 10.4% in July, 12.4% in June, and 11.4% in May.

Lend-lease shipments to all countries declined slightly in August, totaling \$989,000,000, as against \$1,021,000,000 during July. (However, the July figure was boosted by the inclusion of \$56,000,000 worth of airplanes which were previously delivered (WP-Sep11'43,p9), so that technically August is a new high.)

The dollar value of lend-lease exports to Russia is now back to about 30% of the total—where it was at the beginning of the year. The United Kingdom's share for the third time this year has dropped below 40%, viz.:

1943	% of Total	% of Total
	U.K.	Russia
January.....	35%	30%
February....	41	35
March.....	41	27
April.....	44	28
May.....	47	20
June.....	54	17
July.....	39	23
August.....	37	32

The August rise in exports to Russia was traceable chiefly to a \$73,000,000 (nearly threefold) increase in exports of industrial products, including industrial machinery—machine tools, mining and pumping equipment, electrical machinery, power generators, construc-

tion machinery, forges, rolling mills, etc.—presumably needed to reconstruct recaptured Russian industrial areas. Resumption of shipment of tanks (68 were sent in August) partially accounted for the \$22,000,000 increase in tanks and other motor vehicles. Only airplanes and watercraft declined:

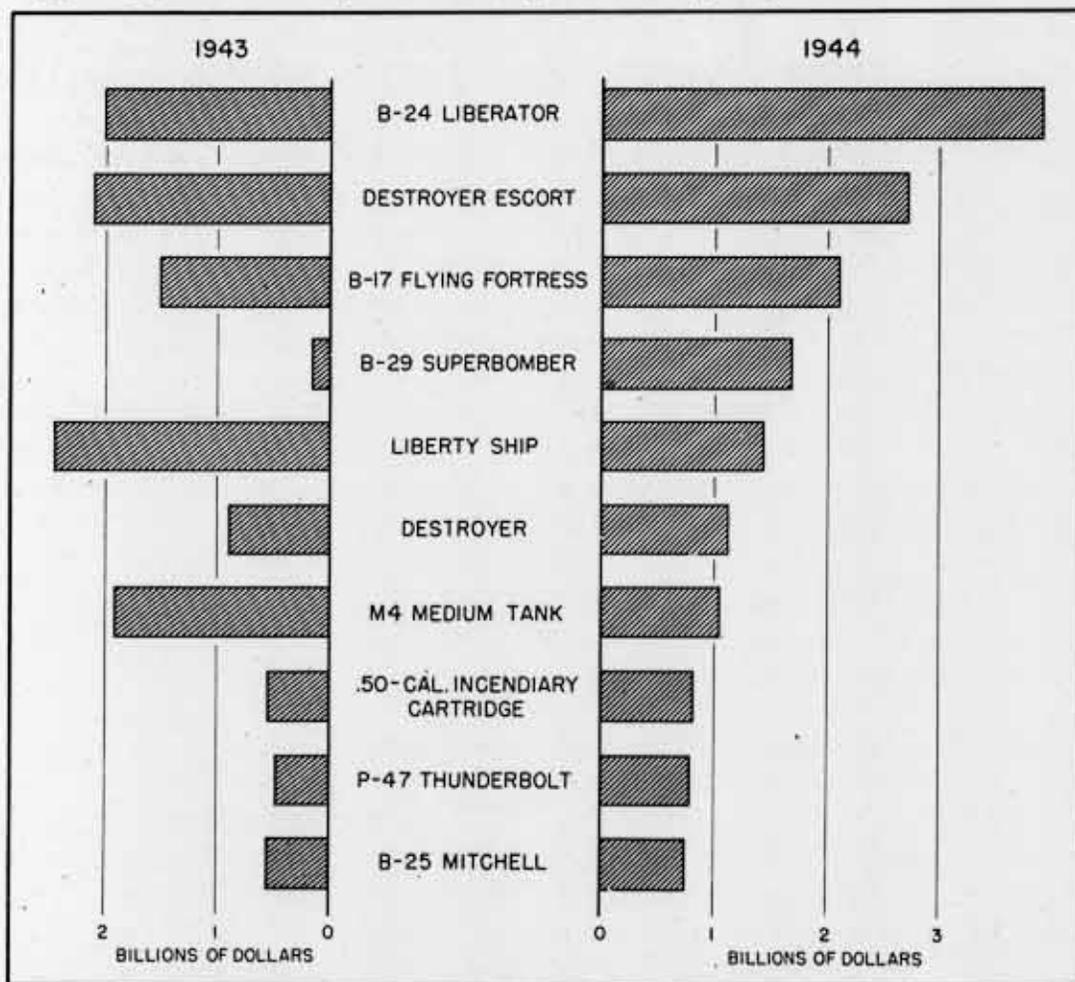
	June	July	August
	(millions)		
Tanks & other motor vehicles.....	\$18	\$24	\$46
Vessels & other watercraft.....	6	18	4
Agricultural products	32	34	43
Industrial products.	62	42	115

	June	July	August
	(millions)		
Ordnance.....	\$ 1	\$33	\$56
Aircraft.....	19	79	49

Nearly half of the total of lend-lease cargoes in August consisted of agricultural products, as compared to 37% in July, and 43% during the first

1944'S BIG 10

One-fifth of next year's munitions program is concentrated in a handful of items. Biggest % gain: B-29 Superbombers. Big cuts: Liberty ships and M4 tanks.



WAR PROGRESS

KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program—Checks paid (millions of dollars)-----	1,640	1,380	1,731	1,611	1,253
War bond sales (millions of dollars)-----	712	886	208	201	243
Wholesale prices (1926=100)					
All commodities-----	103.0 ^p	102.9 ^p	102.8 ^p	103.4	99.7
Farm products-----	123.6 ^p	123.8 ^p	123.3	124.7	108.7
Foods-----	105.0	104.9	104.7	107.8	103.0
All other than farm products and foods-----	97.5 ^p	97.4 ^p	97.3 ^p	96.7	95.7
Petroleum:					
Total carloadings-----	54,921	53,414	57,084	54,730	55,791 ⁿ
Movement of cars into the East-----	25,709	23,979	28,031	26,886	27,851
East coast stocks for civilian use (1940-41=100 Seas. Adj.)	44.4	43.0	40.3	30.5	59.6
Total stocks of residual fuel oil (thousands of barrels)-----	66,407	66,659 ⁿ	67,675	67,483	79,303
Bituminous Coal:					
Production (thousands of short tons, daily average)-----	2,013	2,008 ⁿ	2,022	2,108	1,930
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports-----	2,719	2,678	2,843	1,713	1,317
Gulf Coast ports-----	384	368	360	363	304
Pacific Coast ports-----	1,454	1,448	1,370	1,045	787
Unused steel capacity (% operations below capacity)-----	-0.8%	-0.8%	-0.3%	0.4%	1.4%
Department store sales (% change from a year ago)-----	-5%	+2%	+1%	-7%	+2%

p. preliminary r. revised

half of the year. Agricultural products reached a new peak of \$200,000,000 (the previous high was \$158,000,000 in June) and industrial products set a new record of \$272,000,000 (as against the previous high of \$225,000,000 in July).

SHIPMENTS TO U. K. DECLINE

Shipments to the United Kingdom have declined steadily since the \$427,000,000 peak in June—\$392,000,000 in July, \$370,000,000 in August. Only in one category (agricultural products) did the United Kingdom show an increase in August.

India, the Middle East, and Australia all received less lend-lease aid than in July:

1942	June	July	August
	(in millions)		
U.K.	\$425.7	\$392.0	\$370.0
Russia	179.6	270.0	313.0
Egypt	51.5	105.4	83.4

1943

	June	July	August
	(in millions)		
Australia	\$27.9	\$70.1	\$41.3
New Zealand	6.8	7.1	7.7
India	64.8	64.2	56.8
Iran	1.7	1.6	.8
Iraq	4.9	10.8	4.0
Union of S. Africa	11.3	5.9	11.0
French Morocco .	*	.8	5.0
Algeria	18.2	54.3	33.5
Nigeria	1.6	1.1	1.2
Turkey	4.8	31.4	12.8
Gold Coast	1.2	*	.8
Brazil	3.4	6.9	2.2
China	1.2	4.0	4.7

* Less than \$50,000

Lend-lease exports to China were the highest for any month since the closing of the Burma Road, due largely to aircraft, which was up more than 100% over July. Exports of aircraft to India also rose sharply—from \$5,000,000 to \$14,000,000.

CONFIDENTIAL

Typewriter Resumption

Placement of contracts indicates that manpower considerations are basic in deciding which plants can go back to peacetime product. Bulk goes to services.

TWO WEEKS AGO, in response to positive demands from the Army and Navy, the War Production Board authorized a modest expansion in typewriter manufacture. But Royal Typewriter, the largest producer, did not get on the list; and Underwood Elliott Fisher, next largest, barely made it. Their main plants are in Hartford, Conn., a Group I (critical) labor area, and contracts are being pulled out of that area, not put in.

UNDERWOOD WINS CONTRACT

Underwood Elliott Fisher entered a case for production at its Hartford plant. Underwood, alone, had approximately \$1,500,000 in parts on hand at Hartford. It contended that it would have to supplement this with only a small amount of new production to piece out and assemble finished typewriters. But its appeal was denied. It was only when Underwood agreed to (1) fabricate the additional parts needed at a smaller plant outside Torrington, Conn. (a Group II area), and (2) assemble them at its New York City repair center (Group IV) that it won a contract for 10,000 machines.

Royal was not so lucky. It, too, had parts inventories—\$1,000,000 worth—in its Hartford plant. As yet, it hasn't worked out a plan for making additional parts and assembling typewriters in a less stringent labor area. But it is still trying.

All told, the current plan calls for the production between now and March,

1944, of 112,000 machines, of which 86,000 are office models and 26,000 are portables. In the full year 1941, the industry produced more than 1,000,000 typewriters, a record high.

Only one company—Woodstock—has been manufacturing typewriters since November, 1942, when an amendment to Order L-54a cut off all other typewriter production in favor of further conversion to war work: ammunition, shell parts, airplane propellers, quartermaster supplies, precision instruments for ordnance and aircraft, etc. Now, four other companies are back in the business, and production has been increased from 1,600 typewriters a month to 9,330. All of the plants are in Group II, III, or IV labor areas. The awards follow:

Typewriter Plant	% of Total Authorizations
Remington Rand	
Elmira, N.Y.—III.....	39%
Smith-Corona	
Groton—II & Syracuse—II.....	38
Woodstock Co.	
Woodstock, Ill.—IV.....	11
Underwood Elliott Fisher	
Torrington—II & N.Y.C.—IV.....	9
International Business Machines	
Rochester—II.....	3
	100%

The entire requirement for portables will be filled at Smith-Corona, Groton, N.Y. Practically all of the nonportables are special types: electromatic, wide carriage, telegraphic, and foreign keyboard models. Secondhand stocks of such machines have never been large, and once the production freeze was instituted they were snapped up by the armed services and the government.

A total of 97,000—87%—of the machines will be earmarked for the Army and Navy, Maritime Commission, Office of Economic Warfare, and Lend-Lease Ad-

ministration. The remaining 15,000 machines, or 15%, will be set aside for essential civilian users, principally war plants.

War Progress Note

MUNITIONS' BIG 10

ALTHOUGH the munitions program involves thousands upon thousands of items—from rifle ammunition to battleships, from shoes to many-ton tractors, from machine guns to tank destroyers, nonetheless there is a high degree of concentration: Ten items constitute almost 20% of the 1944 program (chart, page 10).

Topping all others is the Liberator bomber, with a valuation of \$3,900,000,000. But all the eggs are not to be carried to Germany and Japan in the Liberator. Three other bombers are among the first 10—the Flying Fortress, the B-29 superbomber, and the Billy Mitchell medium bomber.

Second on the list is the destroyer escort vessel. Value put in place on that ship for next year is now figured at \$2,700,000,000. Another naval item is in sixth place—the destroyer.

Only one ground army item is listed: The M4 medium tank. There is also the .50-cal. incendiary cartridge, but it is preponderantly (75%) used in aircraft machine guns. In all, six of the "Big 10" production programs for 1944 are in the aircraft group, comprising 60% of the value:

	Value of Big 10 Items (millions)	% of '44 Require- ment
1. B-24 Liberator...	\$ 3,900	4.7%
2. Destroyer escort.	2,700	3.2
3. B-17 Flying For- tress.....	2,100	2.5
4. B-29 Superbomber.	1,700	2.1

	Value of Big 10 Items (millions)	% of '44 Require- ment
5. Liberty ship.....	\$1,400	1.7%
6. Destroyer.....	1,100	1.3
7. M4 Medium tank...	1,000	1.2
8. .50-cal. incendi- ary cartridge...	800	1.0
9. P-47 Thunderbolt.	800	1.0
10. B-25 Mitchell....	800	1.0
Total.....	\$16,300	19.7%

These Big 10 items mirror the strategical trend of the war: Big and bigger bombers to blast the enemy from the air; high-flying fighters to accompany the bombers on their missions; great numbers of cargo ships (if Victory models were included the percentage and dollar value would be greater), with vastly increased protection from destroyer escort vessels. Tanks, despite the 46% cutback in M4s, will still be the spearhead of the ground columns.

REPORTS ON REPORTS

Sisal, Henequen, and Abaca

Production of Haitian sisal and Mexican henequen has been stimulated by wartime demand for fibers and cordage in the United States and Latin America, while in Panama and other Central American countries, abaca plantations have been developed under contracts with the U.S. Defense Supplies Corporation. *Fibers* (confidential; pp. 13) discusses the effect of wartime expansion and prosperity of the fiber industry on the postwar economies of Latin America. (Coordinator of Inter-American Affairs, Research Division)

Dwindling Drying Oils

Despite restrictions which limit civilian consumption to 50% of 1940-41

SELECTED MONTHLY STATISTICS

Consumer Expenditures-Retail Sales-Civilian Production-Employment

	Latest Month*	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Some Month 1939	Some Month 1937
CONSUMER EXPENDITURES (million dollars)	7,336 ^p	7,542 ^r	7,387	6,806 ⁿ	6,526	4,904	5,152
Goods	4,874 ^p	5,091 ⁿ	4,960	4,383 ⁿ	4,224	3,074	3,279
Services	2,461 ^p	2,451 ⁿ	2,427	2,411 ⁿ	2,301	1,901	1,872
RETAIL STORE SALES-TOTAL (million dollars)	4,915 ^p	4,936 ⁿ	5,189	4,498 ⁿ	4,615	3,399	3,442
Durable goods	762 ^p	777 ⁿ	827	638 ⁿ	846	852	979
Nondurable goods	4,153 ^p	4,159 ⁿ	4,362	3,860 ⁿ	3,769	2,547	2,464
PRODUCTION OF CLOTHING AND SHOES FOR CIVILIANS (1935-39=100) [†]							
Clothing and Shoes combined	105 ^p	104	105	111	102	n. a.	n. a.
Clothing	105 ^p	106	108	114	102	n. a.	n. a.
Shoes	104	94 ⁿ	95	101	102	n. a.	n. a.
FEDERAL CIVILIAN EMPLOYMENT (thousands)	3,148 ^p	3,149 ⁿ	3,133 ⁿ	2,928 ⁿ	2,455	962	880
War	2,337 ^p	2,361	2,351	2,103	1,574	n. a.	n. a.
War Department	1,448 ^p	1,500	1,404	1,379	959	n. a.	n. a.
Navy Department	680 ^p	637	634	580	476		
Other War Agencies	209 ^p	224	223	214	139		
Nonwar	811 ^p	788 ⁿ	782 ⁿ	825 ⁿ	881	n. a.	n. a.

* Retail Store Sales, August; All Other, July.
^p Preliminary. ^r Revised. [†] Unadjusted. n. a. Not available.

usage and establish maximum amounts for specified classes of paints and varnishes, the supply of drying oils is a serious problem. *Paints and Varnishes* (confidential; pp. 12) points out that economy in the use of all drying oils, especially tung oil, must be exercised to avert a more serious shortage. The situation with respect to linseed and dehydrated oil is expected to improve this fall, but the gain may be but temporary because of continued heavy demand. (Department of Commerce, Bureau of Foreign and Domestic Commerce)

Lend-Lease Poll

The man in the street has an exaggerated idea of American aid to the United Nations, and greatly underestimates British return lend-lease to the United States, according to *Public Awareness of Reverse Lend-Lease* (restricted; pp. 1^f). Only a quarter of the 995 persons questioned view lend-lease as a "mutual aid" arrangement, while 17% had

never heard of lend-lease at all. (Office of War Information, Bureau of Special Services)

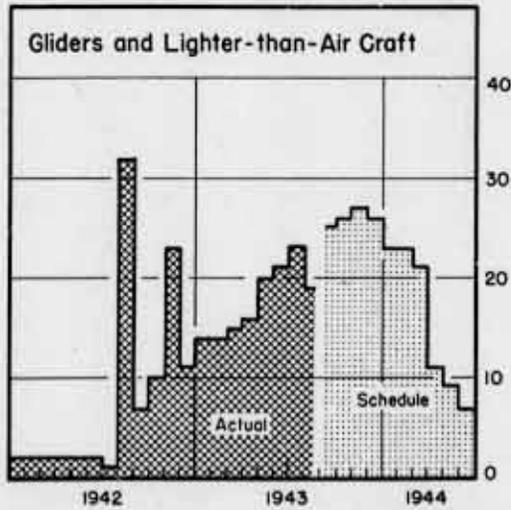
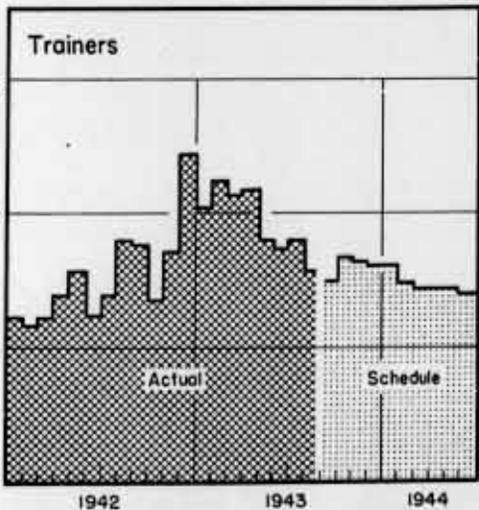
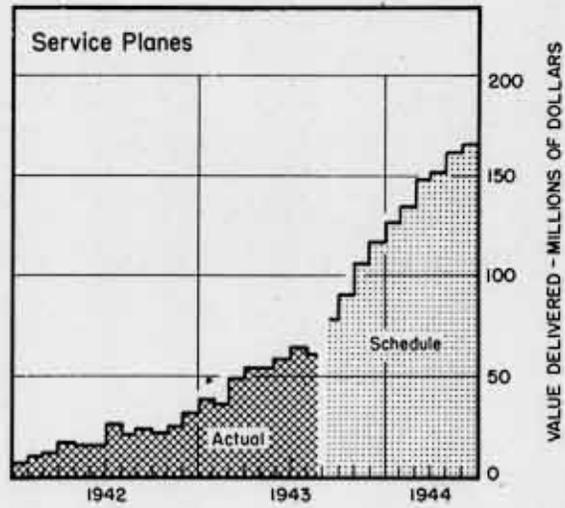
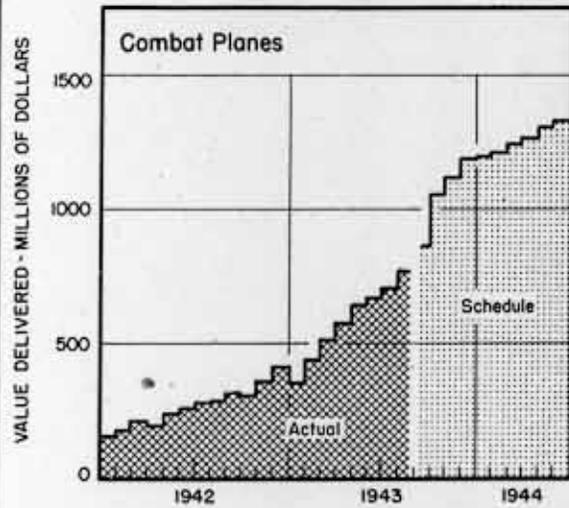
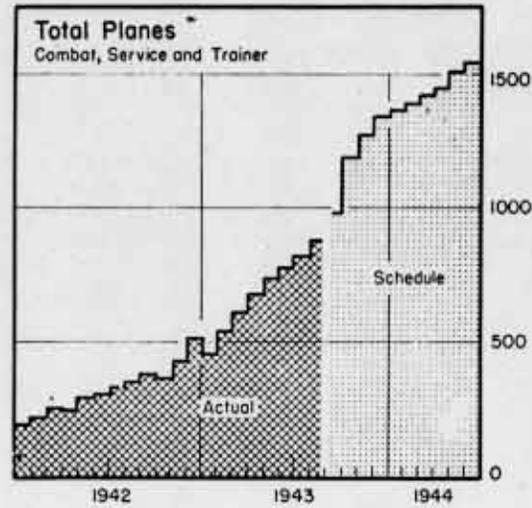
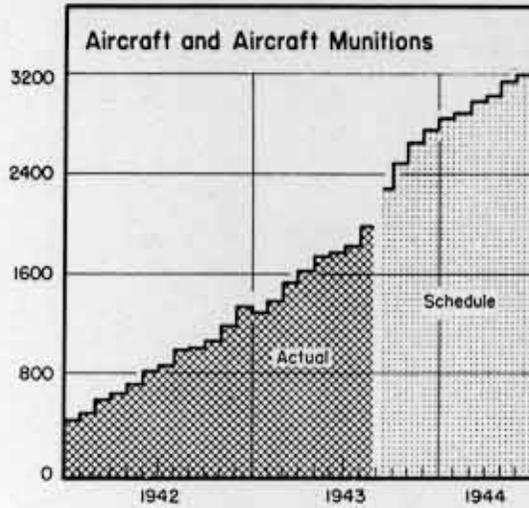
Hides and Skins Tight

Seasonal gain in Federal-inspected slaughter of livestock is not so large as anticipated; for the first eight months of 1943 the kill is 14% under a year ago (22% for calves), according to *Leather* (confidential; pp. 18). As a result, there is a critical shortage of hides and skins, with no relief in sight. However, all available new supplies (both domestic and foreign) are being allocated by the War Production Board to assure equitable distribution. (Department of Commerce, Bureau of Foreign and Domestic Commerce)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

PRODUCTION PROGRESS

Aircraft and Aircraft Munitions

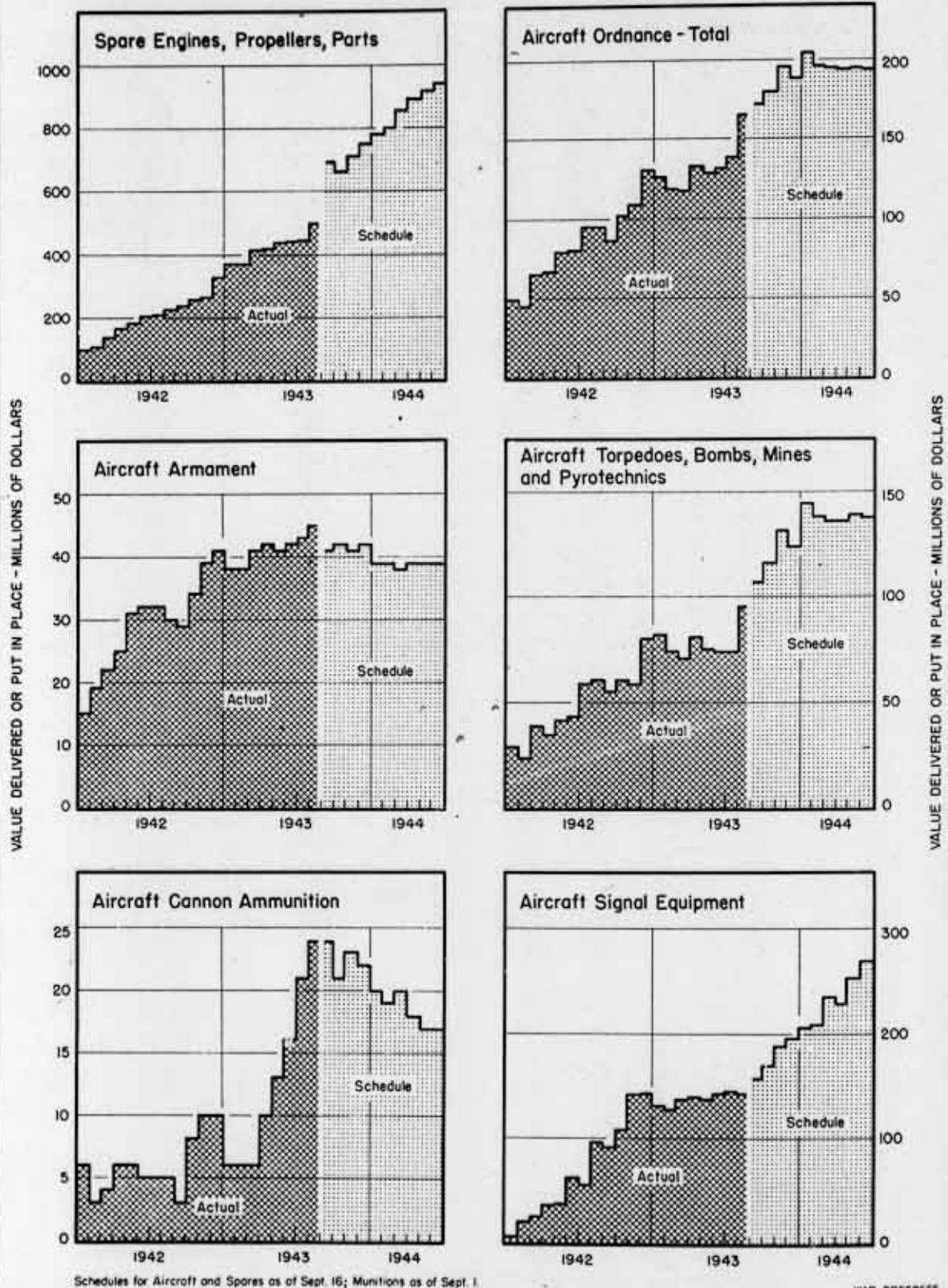


Schedules for Aircraft and Spares as of Sept. 16; Munitions as of Sept. 1.

WAR PROGRESS

PRODUCTION PROGRESS

Aircraft and Aircraft Munitions (continued)



WAR PROGRESS

The President

WAR PROGRESS

Confidential

(British Secret)

DECLASSIFIED
E.O. 11652, Sec. 2(S) and 6(D) or (E)
Commerces Dept. Letter, 11-15-72
By RHP, Bato MAK 29 1973

Number 161

October 16, 1943

Getting More Planes Per Employee

Since 1941, average output per worker has doubled. But variation between plants is wide. Raising less efficient ones to average would gain 150,000 workers.

BACK IN JANUARY, 1941, monthly output per employee in the airplane industry amounted to 28 pounds of airframe weight. Today, the average runs to 60 pounds per employee, an increase of 110%. That increase represents, in large part, the difference between an industry that is getting out of its swaddling clothes and an industry that is approaching maturity.

ONLY 20 PLANTS IN 1941

In January, 1941, much of the production impetus came from foreign government orders—Great Britain, Canada, the

Netherlands—and such new facilities as Vega at Burbank and Douglas at Long Beach were just starting operations. Only about 20 plants in all were turning out planes. They and their subcontractors employed an estimated 140,000 factory and office workers, and produced about 4,000,000 pounds of airframes a month, including spares.

EMPLOYMENT OCTUPLED

Today, more than twice as many plants are in operation, and most of the earlier ones have greatly expanded capacity. Employment has more than octupled to about 1,200,000, and total airframe weight per month runs to some 70,000,000 pounds, or 17 times that of January, 1941.

This big expansion in both aggregate

ANOTHER BIG GAIN AT LOCKLAND PLANT

CONTINUING its comeback, the Wright Aeronautical Corporation plant at Lockland, Ohio, delivered 1,655 of the R-2600B engines in September. This was a big jump from the July low of 267 acceptances, but did not come up to the March high of 1,872. Recent ups and downs at Lockland follow:

	<u>Acceptances</u>	<u>Schedule</u>
March.....	1,872	1,700
April.....	1,375	1,700
May.....	884	1,700
June.....	642	1,900
July.....	267	2,100
August.....	1,058	2,400
September..	1,655	1,400

September acceptances of the 14-

cylinder, 1,700hp Cyclone engine beat the revised schedule of 1,400 with plenty to spare, but they came to only 60% of the old goal of 2,700. And this month's revised schedule, at 1,900 engines, now looks easy to meet—but it is only two-thirds of the original schedule of 3,000. Under the revised schedule, Lockland is not due to get up to 3,000 engines until March.

With the upward production trend, however, there is little likelihood that completions of any of the seven plane models using the R-2600B will be delayed, especially since deliveries of SB2C Helldivers and B-25 Mitchells are lagging for other reasons. But production requirements for spares will not be met for months.

output and output per worker is directly traceable to the 12 months following Pearl Harbor when the construction and equipment of aircraft plants more than tripled—from around \$500,000,000 to \$1,700,000,000. During that time, about 15 new plants began to operate, including Ford at Willow Run, Glenn L. Martin at Omaha, Douglas at Tulsa, North American at Kansas City, Republic at Evansville, Consolidated Vultee at Fort Worth. And airframe orders climbed into the multi-billion-dollar class. Today's total exceeds \$14,000,000,000.

NEW PLANT EFFICIENCY LOW

Although, in the long run, bringing in new facilities with the most modern machine tools and equipment lifts the industry's productivity, in the short run it tends to lower efficiency. Thus, during early 1942, Ford at Willow Run was a heavy employer of labor but didn't turn out a plane. When the first two Liberators were accepted at Willow Run in September, 1942, there were 29,000 employees and production equalled only 1.7 pounds of airframe weight per em-

ployee against an industry average of 45 pounds. Today, Ford's monthly output is about 80 pounds per employee as against 60 pounds for the industry as a whole. In other words, Willow Run is now lifting the general plant average. It has become an "old line" plant; it is to new plants today what Boeing at Seattle, Consolidated Vultee at San Diego, Curtiss at Buffalo, and Douglas at Santa Monica were to Willow Run a year ago.

TOOLING-UP ERA ENDS

About a dozen new plants have yet to come into operation. But with the exception of Bell Aircraft, Atlanta; Boeing Aircraft, Renton, Wash.; and Fisher Body, Cleveland, they are relatively small. Moreover, they will come into the picture at a time when the major tooling-up phase of the aircraft program has been completed. Future major gains in overall production depend chiefly on plants now in operation. Hence, greater efficiency of the labor force—particularly in congested areas where recruitment of new workers is difficult—is of major importance.

BETTER BALANCE NEEDED

One approach to this problem would be to lift the output in the less efficient plants close to the general average. Between June and August, 1943, for example, 22 plants were below average. If their output had been up to average, August airframe weight could have been turned out with about 20% fewer employees. Or the same number of employees could have produced about 83,000,000 pounds of airframe weight instead of 69,000,000 pounds.

Either way you look at it, you'll be gaining a lot of manpower—about 150,000 to 200,000 workers.

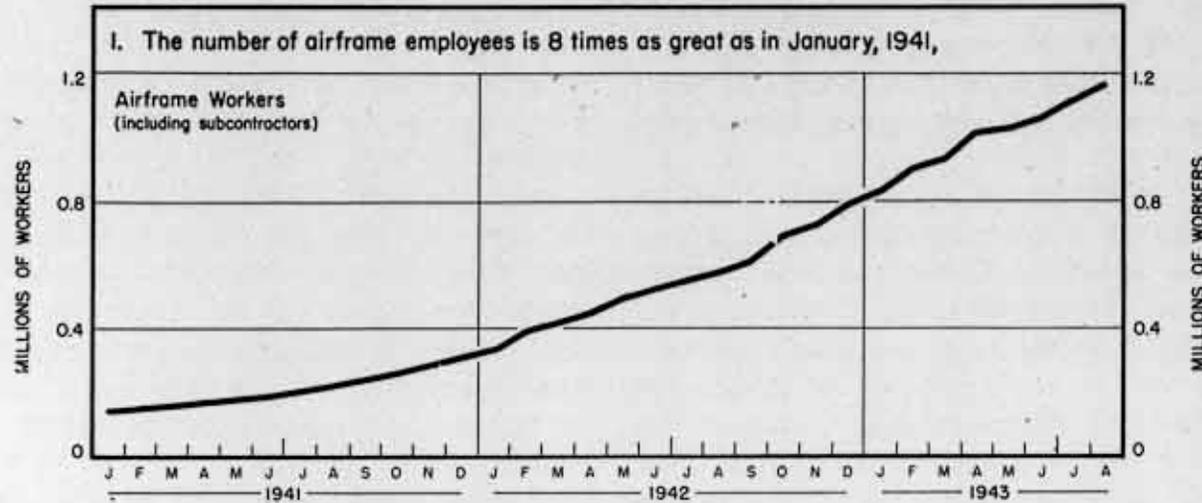
IN THIS ISSUE:

GETTING MORE PLANES PER EMPLOYEE	1
ANOTHER BIG GAIN AT LOCKLAND PLANT	1
OUT OF COMPANY A INTO COMPANY B	4
KEY STATISTICS OF THE WEEK	4
TOUGH SCRAP FOR SCRAP	6
WAR PROGRESS NOTES	8
REPORTS ON REPORTS	9
SELECTED MONTHLY STATISTICS	10
PRODUCTION PROGRESS (GROUND ARMY MUNITIONS)	11,12

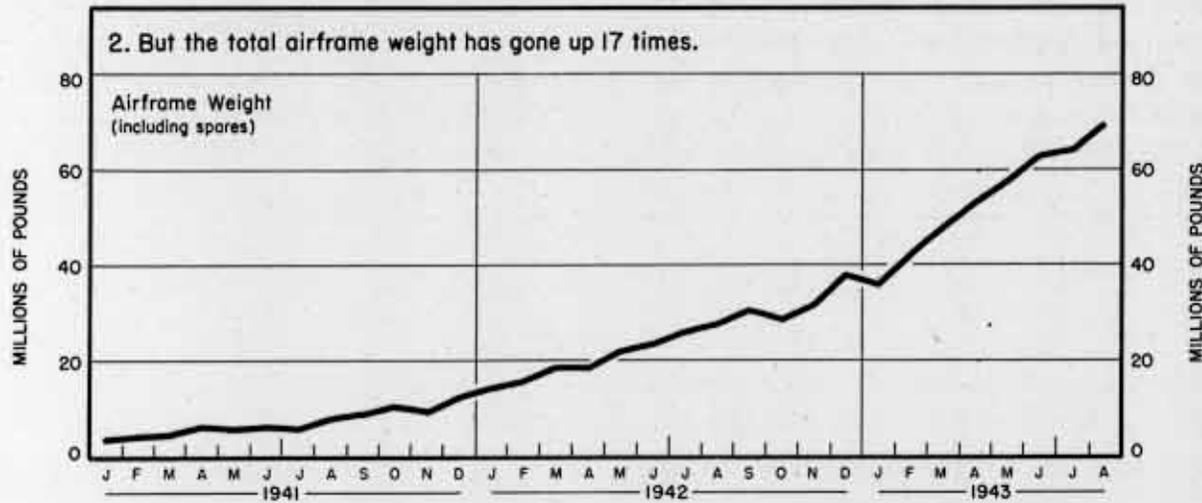
TWO POUNDS FOR ONE

Experience+assembly-line techniques+speed tools = Twice as much airframe weight per worker today as in January, 1941.

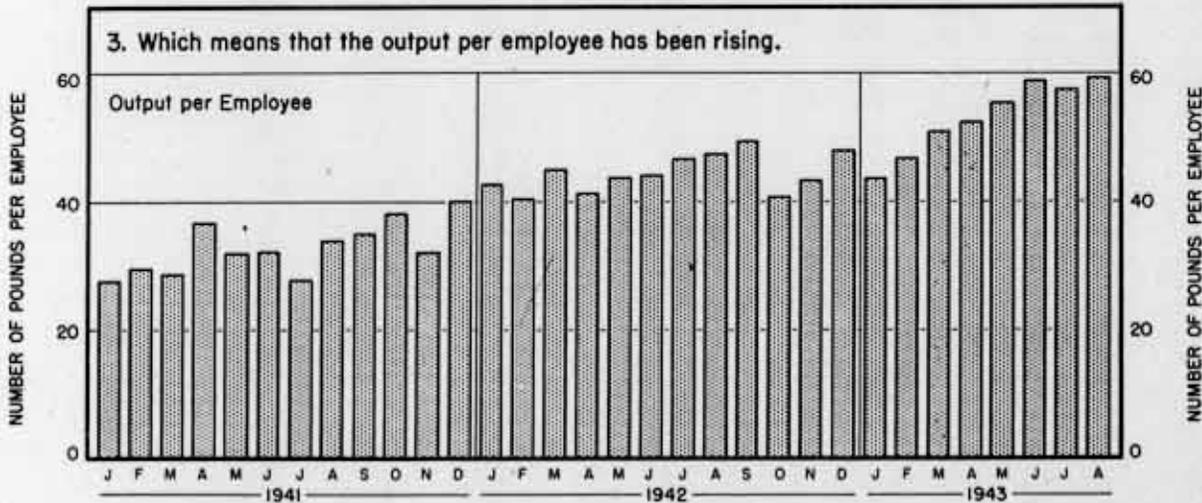
1. The number of airframe employees is 8 times as great as in January, 1941,



2. But the total airframe weight has gone up 17 times.



3. Which means that the output per employee has been rising.



WAR PROGRESS

Out of Company A into Company B

Redistribution Division catalyzes movement of idle equipment and materials from one plant to another. Recent contract cancellations increase magnitude of work.

WAR PRODUCTION BOARD's Redistribution Division is entering a new phase. Having just about completed its steel valves drive (WP-Sept 18 '43, p1), bringing in 140,000 valves, it has started drives to get in antifriction bearings, and brass and bronze valves. On top of all this comes the problem of redistributing inventories of machinery, components, and materials immobilized by recent and continuing cancellations of war contracts due to changing requirements.

This job is right down the division's

alley. It is a staff group that locates supplies and then, through operating divisions of WPB and other agencies, brings prospective buyers and sellers together. It is, in a sense, a catalytic agent, like WPB itself. It has been on this job since late 1941, when the Office of Production Management's initial L and M orders froze huge stocks of raw and semi-processed steel, aluminum, zinc, copper, etc. in the hands of automobile, refrigerator, and countless other manufacturers. Working through other divisions of WPB and through various agencies, such as Steel Recovery Corporation and Copper Recovery Corporation, established in conjunction with the Reconstruction Finance Corporation, it organized 40 dif-

KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program - Checks paid (millions of dollars)-----	1,762	1,640	1,605	1,452	1,278
War bond sales (millions of dollars)-----	662	712	178	182	184
Wholesale prices (1926 = 100)					
All commodities-----	102.8 ^p	103.0 ^p	102.8 ^p	103.5	99.8
Farm products-----	122.7 ^p	123.6 ^p	123.2	124.3	108.9
Foods-----	104.9	105.0	104.8	107.9	103.3
All other than farm products and foods-----	97.5 ^p	97.5 ^p	97.4 ^p	96.7	95.7
Petroleum:					
Total carloadings-----	55,042	54,921	55,571	56,988	52,839 ^p
Movement of cars into the East-----	25,950	25,709	27,167	29,449	25,389
East coast stocks for civilian use (1940-41=100 Seas.Adj.)	46.3	44.4	41.9	28.8	57.3
Total stocks of residual fuel oil (thousands of barrels)-----	66,585	66,407	67,011	67,185	78,838
Bituminous Coal:					
Production (thousands of short tons, daily average)-----	2,013 ^p	2,017 ^p	2,002	2,027	1,934
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports-----	2,462	2,719	2,678	1,617	1,343
Gulf Coast ports-----	330	384	340	340	363
Pacific Coast ports-----	1,290	1,454	1,438	1,072	847
Steel operations (% of capacity)-----	102.2	100.8	99.6	98.8	100.2
Department store sales (% change from a year ago)-----	+9	-5	+10	+28	+26
p. preliminary r. revised					

CONFIDENTIAL

ferent redistribution programs. Here are some of the results:

<u>Material</u>	Amount	Amount
	Reported	Disposed of
	(000 omitted)	
Aluminum (lbs.)..	38,831	38,831
Copper (lbs.)....	253,388	222,800
Steel (tons).....	973	581
Cadmium (lbs.)...	466	222
Nickel anodes (lbs.).....	5,385	5,374
Magnesium (lbs.).	289	289
Copper screening (sq. ft.).....	46,011	16,728
Manila cordage (lbs.).....	7,330	7,003

Disposition depends upon circumstances. The materials might be (1) retained by the holder; (2) reallocated for use "as is" or for resmelting.

MIDDLEMAN'S JOB

The recently announced liquidation of Steel Recovery Corporation is a signal that this phase of the division's work is practically over. But the new phase has already begun—moving equipment and materials out of plants whose contracts have been reduced, into plants whose operations are still expanding.

Under the present scheme, the claimant agency—Army, Navy, etc.—first tries to divert materials and machinery from one manufacturer to another when a contract has been cut. But when this is not feasible, the claimant agency turns to WPB. The Army, for instance, recently sent in 109 lists of equipment, many of them very large. Other listings come in daily from Navy, Treasury Procurement, Defense Plant Corporation, used equipment dealers, etc. (At one time dealers alone had reported 900,000 pieces of equipment or machinery.) All this may add up to hundreds of millions

of dollars as the program develops.

In moving this equipment, the division will be helped by 700 WPB field men. The great bulk of the equipment, consisting of items usable in any industry, will be referred directly to the regional offices. A few highly technical or critical items, such as resistance welding equipment, will be handled by the appropriate industry division. With these lists as the basis, applications for new equipment—PD-1As, PD-3As, etc.—can be screened, and where feasible, used or idle equipment substituted.

"TAILOR-MADE" DRIVES

In addition, the Redistribution Division organizes "tailor-made" campaigns to locate special items, such as special motors to help fit out a war plant, large pressure valves to repair a breakdown in an airplane plant, or a large bending brake for a navy yard. Last July, the Maritime Commission wanted 25 special hydraulic wood-boring machines for wooden-barge construction—and within three days the division had located 26 of these machines, plus 37 satisfactory substitutes for good measure. Other emergency calls include orders for 100 electric fans, 1,640 feet of screen cloth, 13,500 screwnuts, 1,500 small air-conditioning units, and 8,000 ounces of silver.

OWNERS SELL—OR ELSE

When the owner refuses to give up such items voluntarily, the division has the power to requisition them (under a Congressional Act of October 10, 1940, amended October 16, 1941) provided that (1) the need for war purposes is urgent; (2) the item cannot be secured elsewhere; (3) a reasonable offer for its purchase has been turned down by the owner. The division has requisitioned

tioned such items as a used Piper airplane, cotton cloth, steel wire rope, food strainers, and motor graders.

Results of WPB searches for supplies can be put to use in scheduling production. For example, when the recent used-typewriter drives yielded only 324,000 machines for the armed forces and Lend-Lease, the division concluded that the country was at the bottom of the typewriter barrel. This conclusion has now been translated into action: on September 23, WPB authorized partial resumption of production of special typewriters (WP-Oct9'43,p12). On the other hand, early in 1943 the division turned up 13,000 commercial sewing machines in its own files, and as a result it was possible to cut production schedules on new machines.

LEVELS INVENTORIES

In effect, the division has a perpetual inventory job. Its function is always to start idle things moving, hold down surpluses, fill in gaps. By leveling off inventories it makes not only for speedier war production but also, potentially, for less repercussing.

Tough Scrap for Scrap

With inventories of steel and iron scrap down to less than three months' supply, WPB launches another salvage campaign. But so far it hasn't gone too well.

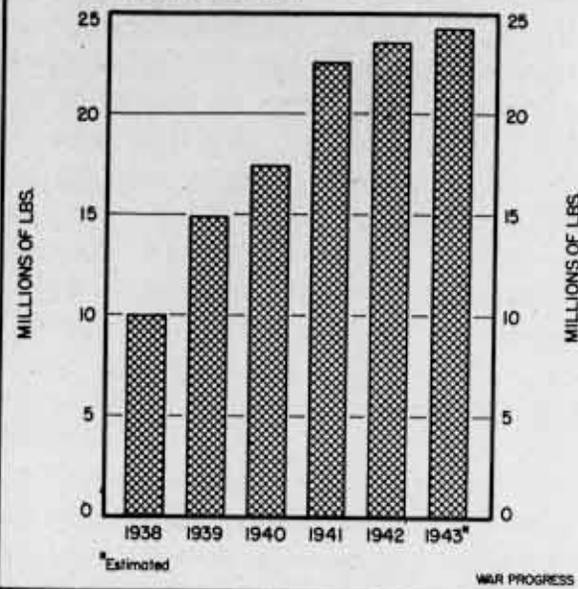
AMERICAN STEEL MILLS and foundries are going into the busiest winter in their history—yet with less than a three months' supply of steel scrap on hand.

As a result, the War Production Board has started another "get-in-the-scrap" drive for steel. But so far it hasn't gone as well as last year's campaign. For this there are several reasons:

1. Some sources of scrap are drying

STEEL'S "BLOOD PLASMA"

This year's consumption of purchased scrap is expected to hit a new high—63% above 1939.



up. For example, auto graveyards—big producers last year—aren't getting as many cars as then. Most of the wrecks have been taken off the market (people are driving old cars because they can't get new ones), and wreckers are ordered to strip the cars of all automotive parts which can be re-used. Furthermore, most of the municipal rail salvage projects have been completed, farmers are reluctant to give up even badly worn equipment, and many home owners cleared out their attics in the patriotic surge of last year.

2. Scrap dealers are hampered by manpower shortages, and as last year, are bumping up against ceiling prices. Trucking costs and wages have risen so that in some areas dealers can't operate at a profit, especially if they travel far from home plate.

3. People are less conscious of the need for getting in the scrap than in 1942. At that time, materials were holding up war production—there was urgent demand for steel, aluminum, cop-

per, etc. Today, however, manpower has become a more serious shortage, and many materials are in oversupply—aluminum, for example. Furthermore, cutbacks in military programs and layoffs have made people feel that demands for steel will be reduced. And still further, last year the military outlook was still indecisive; Americans still had to taste the victories of North Africa, Sicily, and Salerno.

4. The drive has not been so well publicized.

TWO KINDS OF SCRAP

Scrap falls into two categories: (1) home scrap, which results from milling processes within the steel plants themselves; (2) purchase scrap (including scrap from industrial processing and railroad salvage) derived from abandoned buildings, obsolete tools and equipment, old trolley tracks, worn-out auto-

mobiles, farm machinery, miscellaneous household articles, etc.

The problem is to get in the purchase scrap.

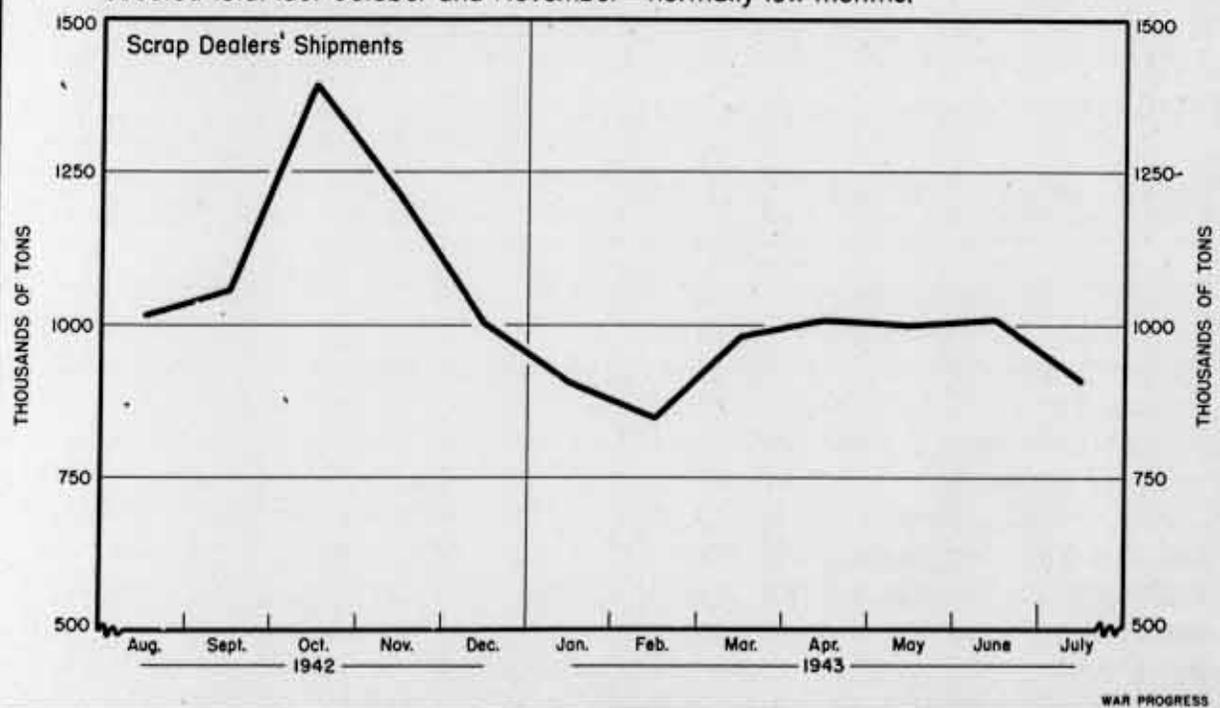
1942 DRIVE A SUCCESS

Last year's drive was a clear statistical and practical success. During the summer months, when purchase scrap collections usually are at a peak, shipments from dealers to steel mills ran at a 1,000,000-ton monthly rate; but under the impetus of the campaign, such shipments rose to nearly 1,400,000 tons in October and to more than 1,200,000 tons in November—months when collections normally are low.

Ever since the war started, ever since steel production rose above the prewar levels, scrap has been a shortage item. As a result, the charge of scrap and pig iron in the open hearth has changed significantly. During 1941,

BACKGROUND FOR THE STEEL SCRAP DRIVE

Dealers' shipments of scrap to mills dropped 10% in July. Note how salvage drive boosted total last October and November—normally low months.



CONFIDENTIAL

for every 1,000 tons of steel ingots made, 507 tons of scrap and 573 tons of pig iron were used (the overcharge is due to wastage lost in the process, chiefly through oxidation); now the ratio is 488 tons of scrap and 600 tons of pig iron.

Tightness in scrap was one of the factors which necessitated the expansion of the country's blast furnace capacity to make pig iron. The increase in pig iron production, in turn, boosted requirements for iron ore from the Mesabi iron range. This year's movement of ore down the Great Lakes has dropped from a hoped-for 95,000,000 tons to an estimated 86,000,000 tons. And if scrap supplies are particularly short—if the scrap is not produced this winter—then the pinch on iron ore next spring will be that much more severe.

PINCH DUE IN SPRING

That's the background for WPB's "Victory Scrap Bank" drive to build up the stockpile. The need isn't to avert steel shutdowns now, but next spring. And that's an idea that is difficult—sloganwise—to get across, even with such a phrase as the nation's "metallurgical blood plasma."

War Progress Notes

OUT OF THE SHIPYARDS

FOR THE FIRST TIME since the war began, employment in shipyards has declined. For every 9.4 workers hired in August, 10 were separated; whereas in the first half of the year 13 were taken on for every 10 who left.

The chief reason for the August loss was the all-time-high quit rate—7.6 out of every 100 employed. The previous peak was in January—7 out of every 100.

Reopening of school was a factor in the high August quit rate. Many boys

and girls left summer work to return to high schools and colleges. And some mothers, whose children were away at camps, had to go back to the kitchen. It all adds up to another indication of how difficult it is to lift employment in the shipyards.

AS OTHERS SEE US

AS THE JAPANESE have the gift to see us, the United States is spending less on war and is having a harder time doing it than is the case.

A broadcast for home consumption, picked up by U.S. monitors, inflated America's 1943 tax bill by about 25%, deflated national income by about 20%, and war expenditures by about 10%:

	Japanese Latest	Estimate	Deviation
	Broadcast		(in millions)

National income....	\$117.0	\$148.0	-\$31.0
War expenditures....	77.8	88.0	-10.2
Taxes.....	51.0	41.0	+10.0

BOX CAR CONGESTION

FREIGHT CAR SHORTAGES, especially gondolas, hoppers, and tank and refrigerator cars, have cropped out sporadically ever since the start of the war. But box cars have been in fairly ample supply until this year. During the spring, a bumper movement of wheat, carried over from the 1942 harvest, taxed facilities, and in the week of March 13, a daily average of 900 carloads of commodities were held up for lack of box cars. The shortage lasted six weeks; it was over by May.

But now there's another box car shortage, and already it has lasted longer than the one this spring. Ever since July, additional cars could have been used, and early this month 3,500 carloads of freight per day were held up

for lack of box cars. However, the squeeze isn't expected to last much longer. It is seasonal, and again wheat is largely responsible. The heavy movement of grain, superimposed on bumper crops of soy beans, rice, flax, and record shipments of munitions and other military supplies, made exceptional demands on box cars.

The number of box cars in service has held fairly steady—744,000 are on hand today as against 755,000 at this time last year. However, only 37 new ones have been put in service this year because of Limitation Order L-97a, which froze box cars in process at car-building plants. The Office of Defense Transportation used its materials allotments for more urgently needed types, such as coal and tank cars.

More box cars are likely to be built from now on, however. The War Production Board's Program Bureau has allotted materials for 2,700 box cars in the last quarter of this year.

SUPPLY PROBLEM

WHEN an armored division goes overseas, 15 Liberty ships are needed to transport its equipment and approximately 3,700 vehicles—and that doesn't include troop ships. Once that division goes into action it uses each day:

- 650 tons of gasoline
- 600 tons of ammunition
- 35 tons of food

To maintain such a division in battle a Liberty ship, or its cargo equivalent, would have to reach it every eight days.

REPORTS ON REPORTS

Salerno Spurs Bond Sales

The *Effect of Salerno News on Third War Bond Drive* (restricted; pp. 6) indicates that in general the bad news gave impetus to bond sales and checked the

over-optimism following Italy's surrender. Replies from 29 editors throughout the country suggest that other stimulants were: touring war heroes, radio and press emphasis, and activity of local drive leaders and labor groups. Obstacles were: income tax payments, high living costs, and inconsistent informational policy.

(Office of War Information, Bureau of Special Services)

Civilian Morale Bugaboos

Consumer Surveys (confidential; pp. 9) conducted by the War Production Board in 29 cities, towns, and rural areas revealed that the shortages causing the most serious complaints and loss of productive efficiency are in alarm clocks, children's shoes, work shoes, refrigeration, flashlight and radio batteries, safety pins, garbage cans, hand tools, and diapers. Surveys to obtain quantitative information on these shortages and on fair distribution of consumer goods are being planned by the Office of Civilian Requirements, with the cooperation of other government and nongovernmental agencies.

(War Production Board, Civilian Requirements Policy Committee Document 5)

Silver's New Importance

U. S. arts and industry used approximately 115,000,000 ounces of silver in 1942—an increase of 195% over 1938 and 24% over 1941; about 60% went into essential products, including such new uses as aviation bearings, solders, brazing alloys, electrical contacts, and surgical equipment. *Silver* (confidential; pp. 2b) points out that the release of Treasury silver for industrial purposes should reduce the dependence of the U. S. on imports from Mexico and Latin America, which have declined since the beginning of the war because of increased

SELECTED MONTHLY STATISTICS

Federal Finance - Income Payments - Labor Turnover - Labor Force

	Latest Month *	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Same Month 1939	Same Month 1937
FEDERAL FINANCE (GENERAL FUND)							
Expenditures - Total (billion dollars)	7.5	7.6	7.1	7.3	5.9	.7	.6
War	6.9	7.2	6.4	6.7	5.4	.1	-
Nonwar	.6	.4	.7	.6	.5	.6	.6
Revenues - Total	5.5	2.7	2.0	5.2	2.5	.7	.7
Income Taxes	4.8	1.6	1.2	4.7	2.1	.3	.5
Other	.7	1.1	.8	.5	.4	.4	.2
War Bond Sales	1.9	.8	.9	.9	.8	-	-
"E"	1.4	.7	.7	.7	.5	-	-
"F" and "G"	.5	.1	.2	.2	.3	-	-
Net Debt	140.2	137.7	132.9	111.3	82.8	38.7	34.0
INCOME PAYMENTS - TOTAL (million dollars)							
Salaries and Wages	11,658 ^p	11,748	12,161	10,499	9,547	5,496	5,897
Comm, Distr, and Serv. Industries	8,457 ^p	8,367	8,405	7,845	6,863	3,712	3,862
Government	6,717 ^p	6,646	6,594	6,151	5,736	3,156	3,364
Military	1,740 ^p	1,721	1,809	1,679	1,092	421	385
Nonmilitary	924 ^p	890	858	793	446	38	33
Other	816 ^p	831	951	886	646	383	352
Other income payments	-	-	2	15	35	135	113
Income payments, annual rate (adjusted for seasonal, billion dollars)	3,201 ^p	3,381	3,756	2,654	2,684	1,784	2,035
	144.6 ^p	143.2	141.9	134.8	118.4	71.1	73.9
LABOR TURNOVER IN MFG. INDUSTRIES † (rate per hundred employees)							
All Manufacturing							
Accessions	7.52 ^p	7.83 ^r	8.40	7.87	7.90	5.06	3.36
Separations - Total	8.12 ^p	7.56 ^r	7.07	7.04	7.06	3.01	3.99
Quits	6.24 ^p	5.61 ^r	5.20	4.65	4.31	0.82	1.23
Military Separations	0.66 ^p	0.69 ^r	0.69	1.23	1.13	n.a.	n.a.
Aircraft							
Quits	5.63 ^p	5.22 ^r	4.55	3.71	4.29	1.45	1.22
Military Separations	0.77 ^p	0.73 ^r	0.68	1.66	1.84	n.a.	n.a.
Shipbuilding							
Quits	7.63 ^p	6.91 ^r	6.20	5.90	5.77	0.78	1.68
Military Separations	1.00 ^p	1.07 ^r	1.06	1.84	1.58	n.a.	n.a.
LABOR FORCE - TOTAL (millions)							
Employment	53.3	54.9	55.5	52.0	54.1	n.a.	n.a.
Male	52.5	53.9	54.3	51.0	52.4		
Female	35.8	37.0	37.2	35.8	38.2		
Unemployment	16.7	16.9	17.1	15.2	14.2		
	0.8	1.0	1.2	1.0	1.7	n.a.	n.a.

* Federal Finance, Labor Force, September; Income Payments, Labor Turnover, August. † Rates beginning 1943 refer to all employees rather than to wage earners only and are not strictly comparable with earlier data.
p Preliminary. n.a. Not available. r Revised.

domestic needs in manufacturing and coinage.

(Coordinator of Inter-American Affairs, Research Division)

European Food Outlook

In Denmark, the present average diet (based on total food supplies—legal, extra-legal, and illegal) is 95% of the prewar caloric level; in Germany it is 85%, but in Norway and Belgium it runs from 55% to 57% of prewar and is below the minimum to maintain health and working efficiency, according to *The Nutri-*

tional Situation in Axis Western Europe (Revised) (confidential; pp. 11). The pattern of consumption varies within the countries, with the farmers and the wealthy who buy from black markets usually able to maintain a diet close to prewar levels.

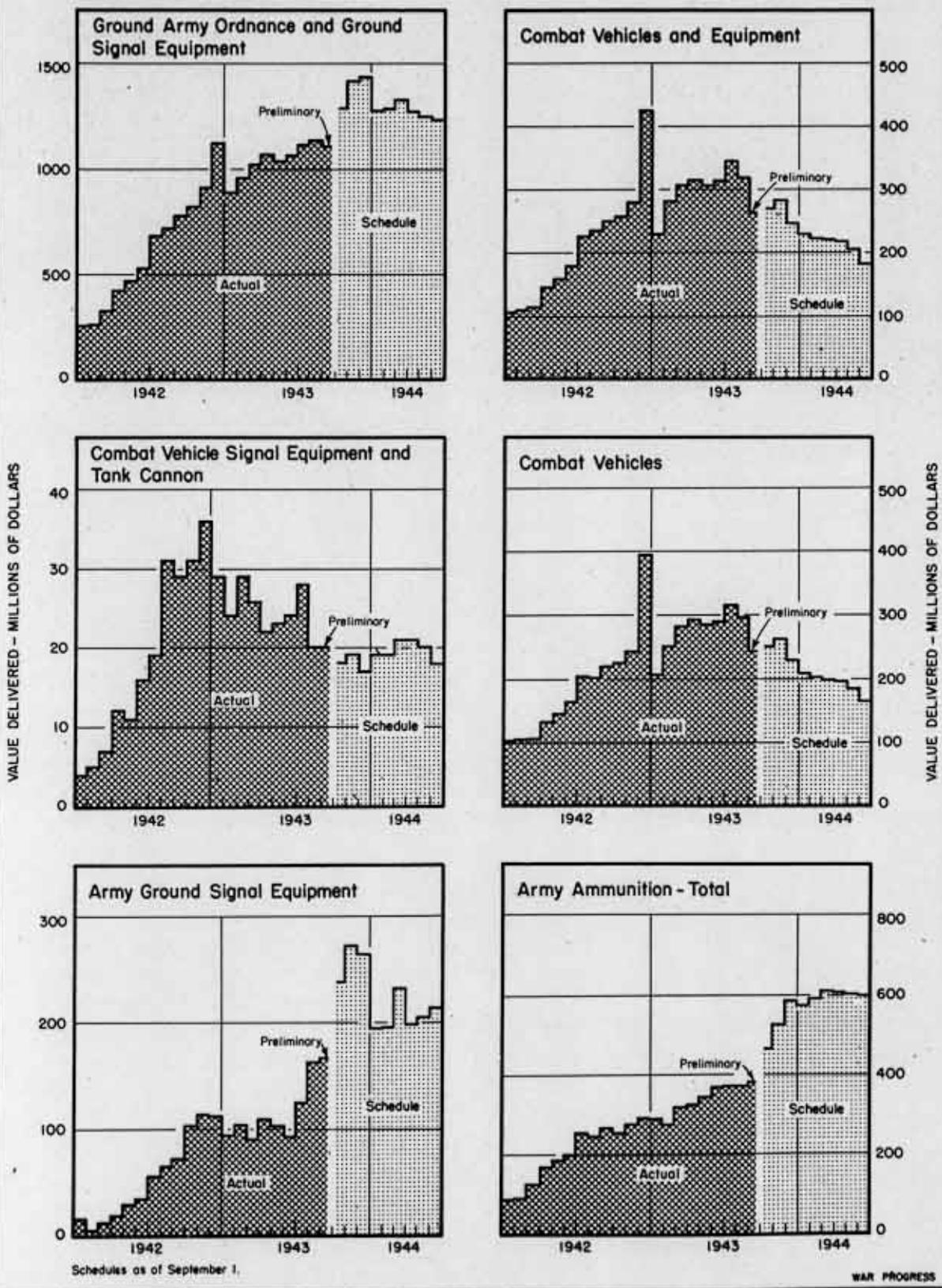
(Office of Strategic Services, Research and Analysis Branch)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

CONFIDENTIAL

PRODUCTION PROGRESS

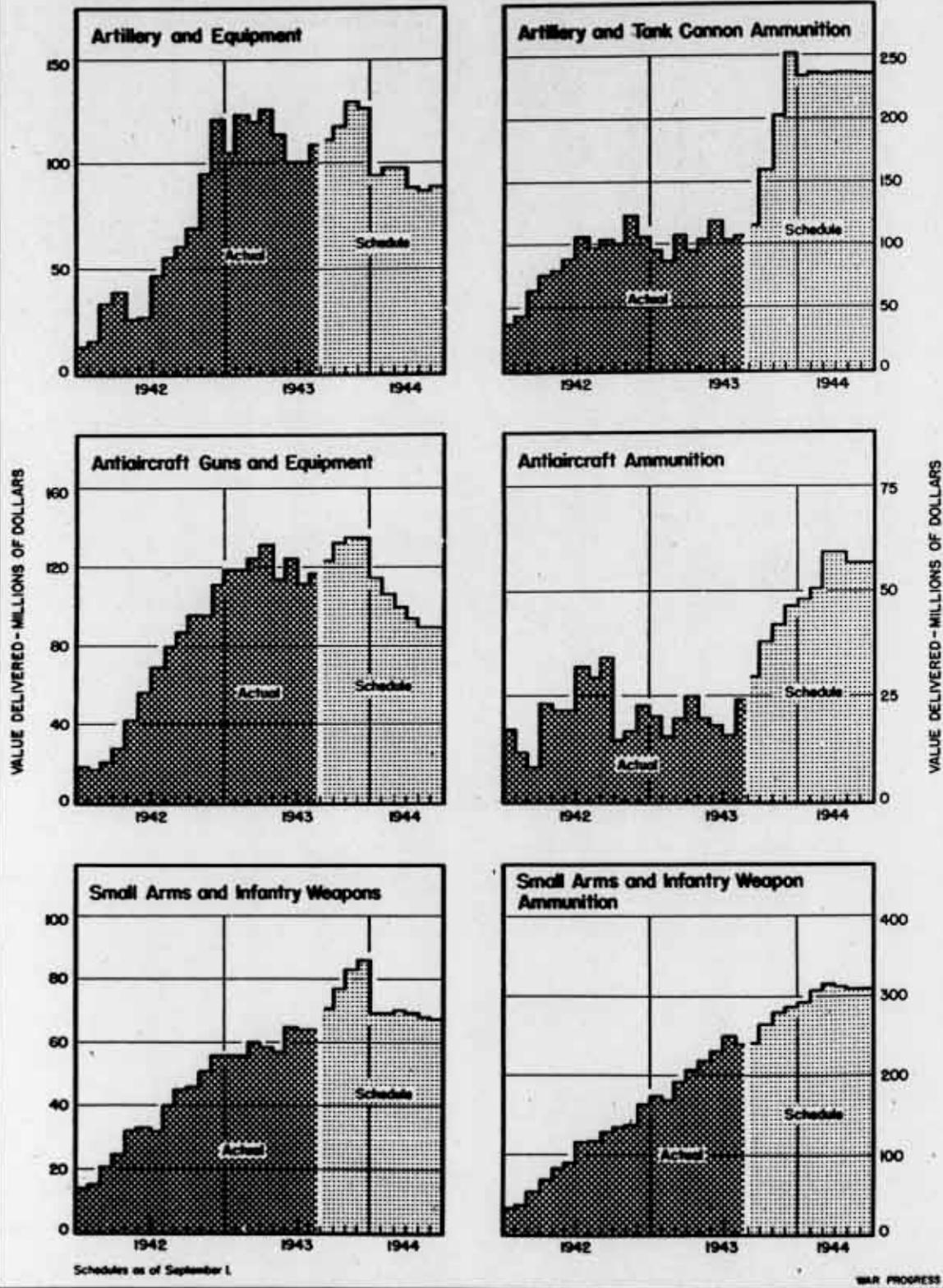
Ground Army Munitions



CONFIDENTIAL

PRODUCTION PROGRESS

Ground Army Munitions (continued)



WAR PROGRESS

Confidential
(British Secret)

DECLASSIFIED
NO. 11624, Sub. NRI and MDD, 11/11/79
Documenta Dept., London, 11/11/79
By: [illegible] MAK 23-873

**Three Cutbacks: Airplanes; Army
Supply Program; Destroyer Escorts**

Fertilizer Windfall

Number 162

October 23, 1943

Seeming Paradox in Plane Revision

Basic trend is toward heavier types, though W-8 cuts them more than average; is compensation for incentive scheduling which pulls high-preference models out of line.

ANOTHER REVISION in the airplane program has been completed; and again the revision is downward—to bring schedules closer to but not quite within reach of probability.

Under the new plan, W-8, the reduction in airframe weight is greater than the reduction in number of planes. For example, during the next three months the schedule is cut from about 31,000 planes to 27,000, or 9%, but airframe weight drops 13%. Similarly, during 1944, the numerical cutback is from 125,000 to 115,000 planes, or about 8%; weightwise, the reduction is 10%.

COMING DOWN TO EARTH

At first thought, the greater reduction in weight than in number does not seem to square with the tendency toward bigger and more powerful models. This departure from expectancy is traceable to the statistical impact of the incentive scheduling technique used in programming plane production. Because heavier planes are in greatest demand, manufacturers of such planes—the long-range heavy bomber is a good example—have consistently been given schedules far beyond their reach. And then, as time moves on, their particular schedules get farther away from probability than the schedules of planes with less ambitious incentives.

This shows up in W-8. The whole program, by and large, was pulled back about three or four months. Roughly

THREE CUTBACKS

THIS issue of WAR PROGRESS carries three separate articles on program revisions: Airplanes (page 1), Destroyer Escorts (page 5), and the Army Supply Program (page 6). It is noteworthy that the changes in the Army Supply Program (for the most part) and the reduction in the DEs reflect the maturity of the munitions effort. Pipelines to battlefronts are gradually filling up, or requirements—in the light of strategical needs—are being realized.

In the case of airplanes, there was a tendency to shift plants making low-priority models to higher ones. Also there was a reduction in current schedules and a consequent carryover of the program so that many preference models reach peaks in 1945.

speaking, goals originally set for next month are not to be reached until February; the goals which had been originally set for last August become the goals for November. But in so pulling back the schedule, it follows that the planes which have been subject to greater-than-average incentive boosts are subjected to greater-than-average cutbacks.

REACH STILL EXCEEDS GRASP

And in designing the new program, schedules for most individual plants were again put on an incentive basis. The idea is to get management and workers to push themselves and their machinery beyond estimated capacity. But

the degree of incentive scheduling varies with the type of production.

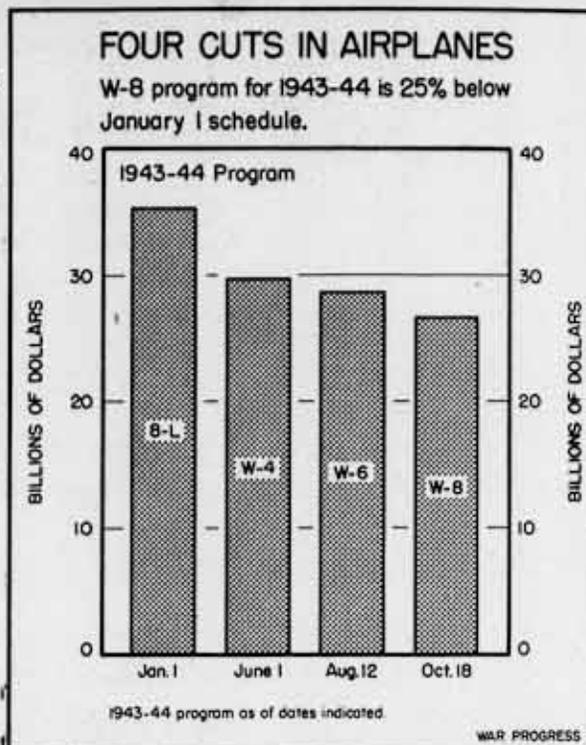
In urgently-needed older-line models, which are now in quantity production—the Flying Fortress and Liberator, for instance—schedules are set around 2% too high in the first month of operation, 4% too high in the second month, and so on to a top of 10% in the fifth month, continuing at that level thereafter.

In urgently-wanted models in which production is in its early stages, the first month of the new schedule is set 3% too high, subsequently rising until the incentive peak reaches 25%. This group includes the B-29 superbomber, P-51 Mustang, and P-38 Lightning.

PROGRAM KEEPS ITS SHAPE

Incentive scheduling is not used in models in which requirements are flat or declining, such as trainers. Nor is it applied to combat models which have outlived their period of greatest usefulness, such as the P-40 Warhawk and the A-30 Baltimore bomber.

Cuts under the W-8 program are spread quite uniformly throughout the year (chart, page 3), and for the first time, schedules are carried beyond 1944. Moreover, the revision from W-6 (and W-7)



does not change the general contours of the program. Bombers still account for more than 40% of the total, and trainers for only 2%, as the following table (1944) shows (weighted by value):

	% of Total	
	W-8	W-6
Heavy bombers.....	41.1%	42.4%
Other bombers.....	22.8	22.7
Fighters (incl. Naval reconnaissance).....	23.3	21.7
Transports (incl. Communications).....	10.3	10.6
Trainers.....	2.2	2.3
Special purpose.....	0.3	0.3

The W-8 program cuts 1944 schedules for superbombers by 18%—from 1,679 to 1,384. Boeing's Seattle plant, which up to now has been working exclusively on Flying Fortresses, is slated to turn to producing the superbombers. The first ones are scheduled to come off the line in November, 1944, after which the B-29 will gradually displace the "Fort" at this plant. Partly because of this and partly because of a reduc-

IN THIS ISSUE:

SEEMING PARADOX IN PLANE REVISION . . .	1
15-DAY PLANE TALLY: OCTOBER LOOKS GOOD .	4
DESTROYER ESCORTS RUN FULL CYCLE . . .	5
THREE ITEMS DOMINATE CUT IN ASP	6
KEY STATISTICS OF THE WEEK	8
NITROGEN: RECORD SHOT IN THE SOIL . . .	9
THE ELABORATION OF THE OBVIOUS (CHART) .	10
WAR PROGRESS NOTES	12
REPORTS ON REPORTS	12
SELECTED MONTHLY STATISTICS	13
PRODUCTION PROGRESS (NAVAL AND MERCHANT VESSELS)	14-16

tion in Liberator assemblies at Ford, Willow Run, the Liberator-Flying Fort program is reduced by 12%, from 16,490 to 14,479. In all, heavy bomber schedules are 13% lower than formerly: 15,863 planes instead of 18,169.

COMMANDOS TO THE FORE

Another important reduction next year is in the 2-engined C-46 Commando transport plane, which is now undergoing engineering and design changes as a result of first reports from the field (WP-Oct9'43,p3); the 1,602 on the docket are 19% fewer than under W-6. During 1944, two new plants will produce the Commando: the boat-building Higgins organization in New Orleans and the Curtiss plant at Louisville. Thereafter, the Commando makes up for lost ground, rising to a monthly peak of 300 in June, 1945, or 85 planes higher than its top schedule under W-6. In 1945, as a mat-

ter of fact, the Commando becomes the dominant transport plane.

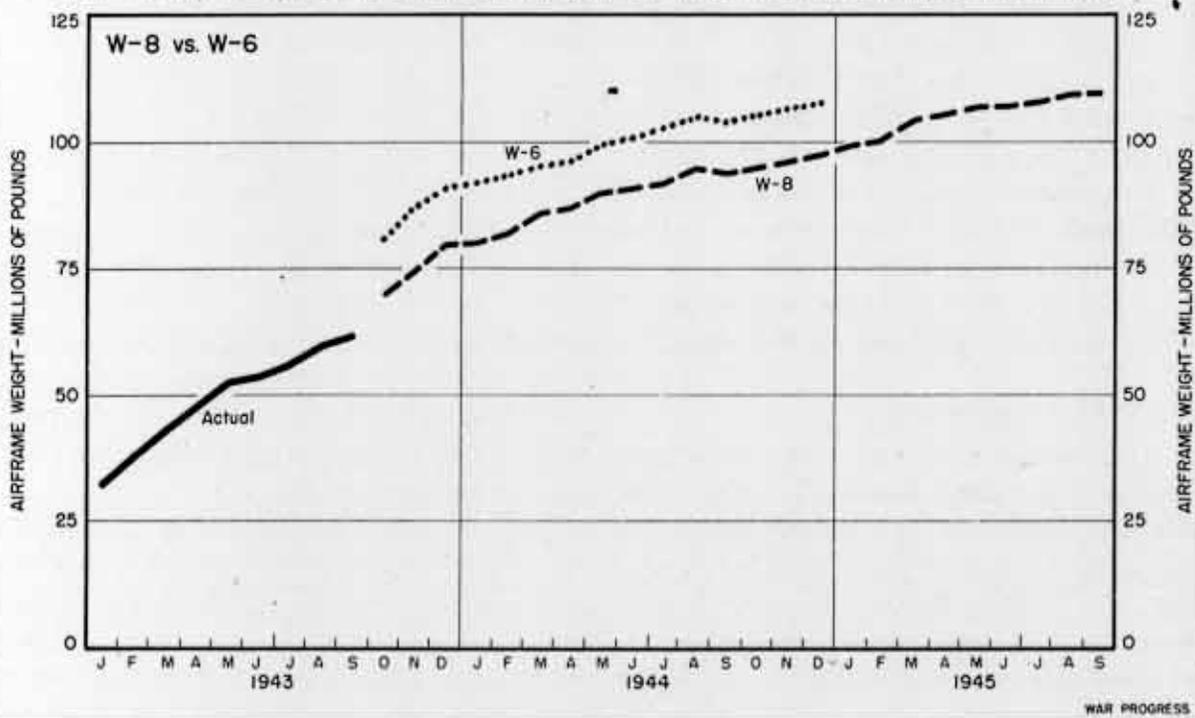
By model, the outstanding rise next year is in the "aerodynamically perfect," more-than-400-miles-an-hour P-51 Mustang, considered the finest fighter plane in the class which includes the Warhawk, Airacobra, Spitfire, Zero, and Messerschmitt 109. Under W-8, schedules for this plane go up 5% next year to 6,177; and North American's Inglewood plant will taper its output of Billy Mitchell 2-engined medium bombers in favor of more Mustangs.

FILLING IN THE GAPS

The other 2-engined medium bomber, the Martin B-26 Marauder, is reduced about one-third and is scheduled to go out of production in December, 1944. Slack at the Glenn L. Martin Omaha plant will be taken up by assembly of the B-29 superbomber early next year. At

THROUGH 1945 WITH AIRPLANES

W-8 schedule carries production plan beyond 1944, cuts next year's program by 12%.



15-DAY PLANE TALLY: OCTOBER LOOKS GOOD

OCTOBER shapes up as a powerful month in plane production. During the first 15 days, some 3,400 airplanes were accepted. Airframe weight ran 12% higher than in the first 15 days of September.

Though this rate of gain is not likely to be carried through the 31st, nonetheless, October's increase looks like the best month-to-month increase since May's 10% gain over April.

The total number of planes accepted may exceed the 8,000 mark for the first time.

Fighter production was outstanding, running 45% ahead of the first half of September. The 2-engined

Lightning, after several months of design-change holdups, came through like a million dollars; 131 were accepted as against 155 in the entire month of September. Airacobra output doubled that of the first 15 days of September, and the Thunderbolt did almost as well.

Slow but sure gains in bomber output continued. Here the gain was 6%. Six superbombers were turned out, and October's total seems likely to exceed the 15 accepted in September.

Despite the fair-sized gain in the offing, the October (W-8) schedule is probably too much to make: 8,530 planes are docketed.

first it was a problem to fill the gap at Martin's big Baltimore plant, but that facility was finally programmed for a yet-to-be-produced version of the superbomber, the B-35 "flying wing."

Despite numerous engineering and design changes, 1944 schedules for the 2-engined Lockheed Lightning (P-38) also get a nod. The '44 program is lowered only 2% to 4,281 planes, and instead of a monthly peak of 378 planes in May, output is to rise steadily to a 1945 peak of 590. Consolidated Vultee at Nashville—originally scheduled to turn out the Boston light bomber—will start on the Lightning in September.

THE DIVERS DON'T DIVE

Indicating that the Army isn't convinced the dive bomber is obsolete, the W-8 revision increases schedules for Army 1-engined light bombing planes 29% to 1,873. The complementary program for the Navy, consistent champion of dive-and-torpedo bombers, is about

the same as it was under W-6, somewhat more than 11,000 planes. Douglas at El Segundo, producer of the Navy's SBD Dauntless, was originally scheduled to turn out an improved model of this plane, the SB2D. But under the W-8 revision, it is switched to a new version of the SB2D, designated as the BTD.

HELLCATS STILL RISING

While W-8 cuts back schedules for the production of many new models, the better to conform to limits of feasibility, the steeply rising F6F Hellcat schedule is unchanged; a high of 500 a month is still called for at Grumman's Bethpage plant in February. This compares with acceptances of 295 Hellcats last month and an initial output of only 12 in January of this year.

As a group, trainers are lowered 7% to about 14,000 planes. The trend toward concentration of primary trainer production is continued. Three plants will make them instead of seven.

CONFIDENTIAL

DEs Run Full Cycle

Schedules are speeded up for rest of year but sharply reduced in '44 to make way for landing craft again. Program now calls for total of 700 instead of 1,000.

THE DESTROYER ESCORT PROGRAM—a Triple-A must nine months ago—has been cut back. It is another sign of the gradual maturation of the country's munition program.

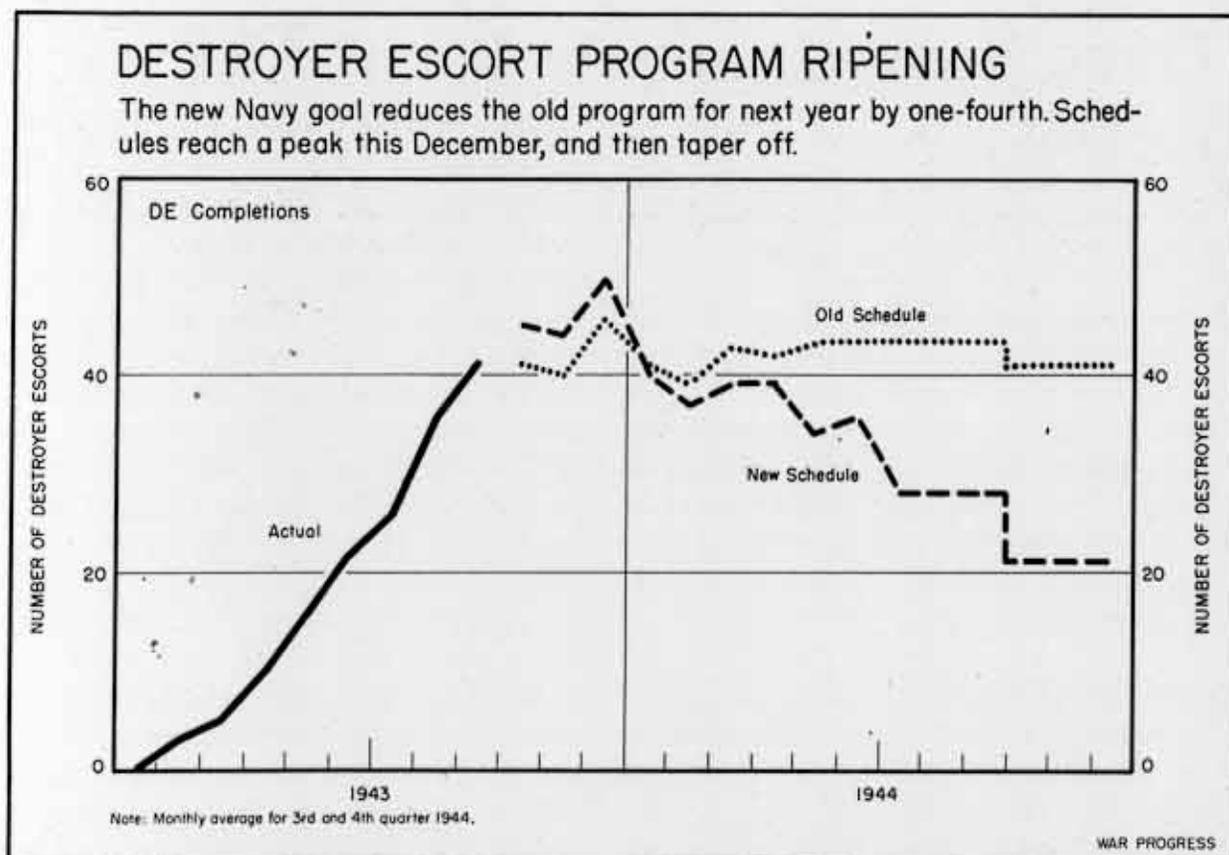
A month ago, more than 1,000 DEs were scheduled for completion by the end of 1945; now that number has been cut to 700. Reasons for the cutback: (1) the more urgent need for landing vessels; (2) the increasing success of the United

Nations campaign against the submarine.

Recent DF deliveries have run ahead of schedule. Last month, for example, 41 came through as against a schedule of 36 (WP-Oct 9 '43, p1). And in the last three months of this year, 129 are slated to come through under the revised program, as against 127 under the old.

OVER THE TOP—AND DOWN

Thus the reduction in the program does not become effective until 1944, when 372 are called for instead of a former total of 503. The program drops abruptly in January and declines progressively as the year moves on (chart, below). An even sharper decline than is now scheduled may take place if some



DEs are a good example of the birth, growth, and maturity of a lusty munitions program. Off to a late start in February, they were running ahead of schedule by June and now are making such speed that a new schedule calls for a peak of 50 in December. But now the program has been cut back—from 1,000 to 700. Production will drop sharply in January and keep falling during 1944. The curve may drop and flatten out even faster than chart indicates: revised schedules will probably spread the reduced program further into 1945 than now planned.

deliveries, now ticketed for 1944, are pushed over into 1945—as seems likely. At present only 30 DEs are scheduled for completion in '45.

LUSTY CHILD IS BORN

Initial deliveries of DEs started in February of this year—several months behind the original schedule. They were supposed to come through in November, but landing craft then had the green light and DEs gave way. Thus, the current reduction in the DE program is production history repeating itself.

After a slow start, DE deliveries picked up speed along about June and currently are rising toward the scheduled peak of 50 in December—or seven

ahead of the schedule as of September 1. If that rate of delivery were maintained, the full schedule of 700 vessels would be completed by August, 1944.

Yearly deliveries, under the new and old programs, are as follows:

	<u>New</u>	<u>Old</u>
1943.....	298	281
1944.....	372	503
1945.....	30	281

Here is the status of the program as of October 1, 1943: 159 DEs had been completed, 125 had been launched, 112 were on the ways, and some percentage of completion was listed for 122 whose keels had not been laid—a total of 518 built or building.

Three Items Dominate Cut in ASP

\$1,000,000,000 reduction in Army requirements comes on top of much larger slash two months ago and continues downtrend since March. More are in offing.

ARMY REQUIREMENTS have been slimmed again—about \$1,000,000,000, or 2%, has been cut out of the 1943-44 program. Ordinarily, a billion-dollar two-year excision would not be worth many paragraphs; but this particular reduction comes two months after the formal \$5,000,000,000 cutback in the Army Supply Program of August 1.

ORDNANCE LEADS THE WAY

Virtually all of this latest reduction is in ordnance items, which are down about 4%. And three important categories account for virtually all this reduction, as follows:

- Small arms and infantry weapons ammunition—off 11%
- Aircraft bombs, torpedoes, etc. —off 6%

Antiaircraft guns and equipment —off 14%.

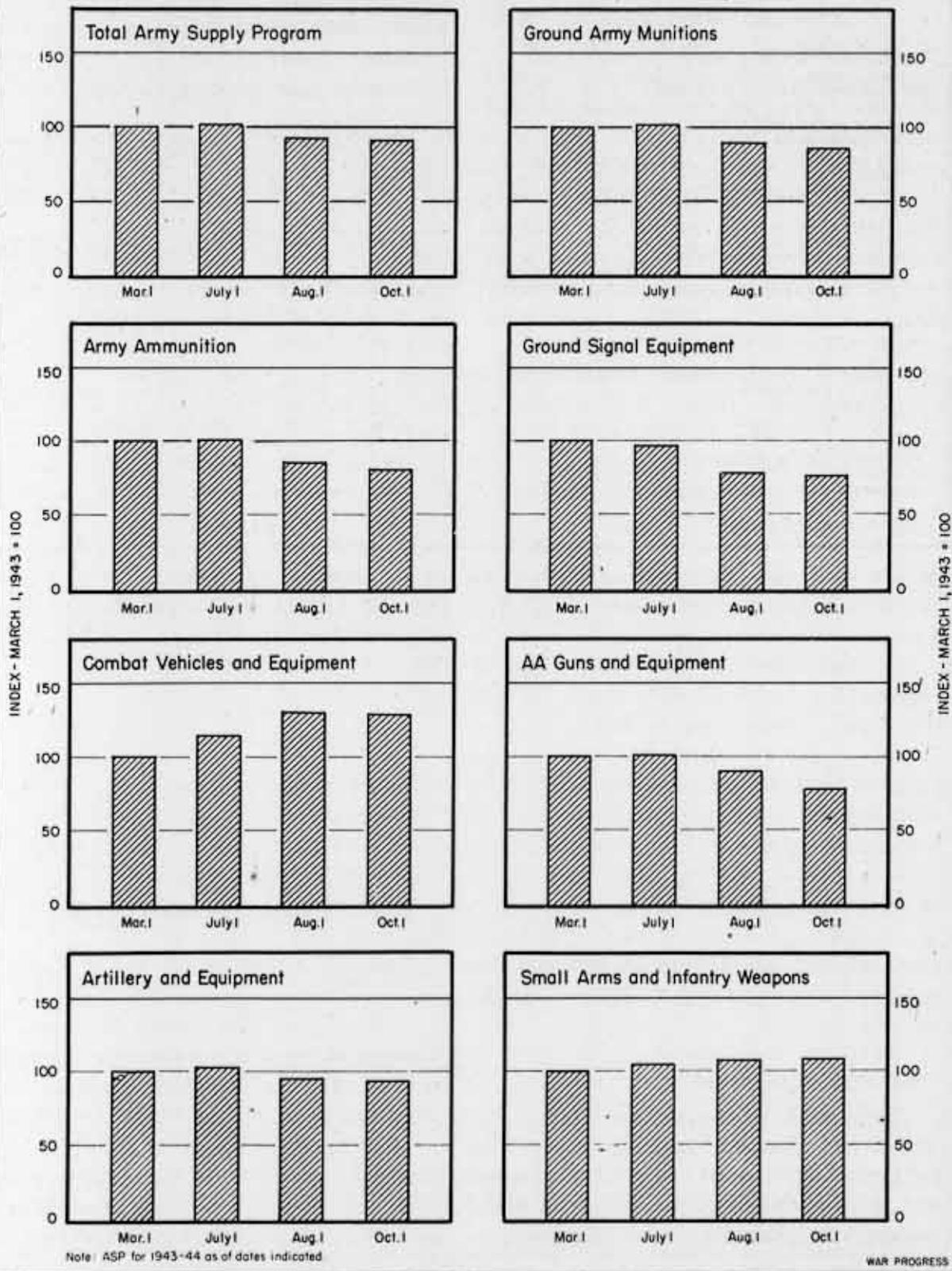
And in each of these categories, one item dominates the cutback:

1. Reductions in the .50-caliber machine gun cartridge—incendiary, armor-piercing, and tracer—account for virtually all of the August-October cut in small arms and infantry weapons ammunition. On August 1, the two-year aggregate requirements were 11,215,000,000 rounds; now they are 9,020,000,000, down 20%. Incendiary cartridges accounted for nearly half of the reduction, AP for 37%. Since March, AP has fallen off from 7,500,000,000 to 3,300,000,000 rounds—a 56% slice in seven months. Use of these cartridges simply hasn't been up to original expectations.

2. The six-pound incendiary oil bomb is an overwhelming influence in the new aircraft bomb revision. Whereas 74,000,000 of these were planned for 1943-1944 on August 1, requirements now are 9,700,000—an 87% cut—with none at all

HERE'S THAT CUTBACK AGAIN

Army Supply Program for 1943-44 cut 2% since August, 10% since March.
 Army ammunition accounts for two-thirds of the drop from August.



KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program—Checks paid (millions of dollars) ———	1,600	1,762	1,727	1,462	1,070
War bond sales (millions of dollars) ———	470	662	299	195	164
Wholesale prices (1926=100)					
All commodities ———	102.9 ^p	102.8 ^p	102.9 ^p	103.5	99.6
Farm products ———	122.8	122.7 ^p	123.6 ^p	124.4	107.9
Foods ———	104.7	104.9	104.5	108.4	103.1
All other than farm products and foods ———	97.5 ^p	97.5 ^p	97.4 ^p	96.8	95.6
Petroleum:					
Total carloadings ———	53,449	55,042	53,574	57,392	52,677
Movement of cars into the East ———	25,008	25,990	26,646	29,809	25,306
East coast stocks for civilian use (1940-41=100 Seas. Adj.)	48.0	46.3	42.5	28.1	57.5
Total stocks of residual fuel oil (thousands of barrels) ———	65,518	66,585	66,893	67,007	78,762
Bituminous Coals:					
Production (thousands of short tons, daily average) ———	2,008 ^p	2,016	2,031	2,067	1,943
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports ———	2,505	2,462	2,628	1,834	1,292
Gulf Coast ports ———	347	330	396	326	317
Pacific Coast ports ———	1,284	1,290	1,439	1,061	783
Steel operations (% of capacity) ———	100.7	102.2	100.6	99.1	101.0
Department store sales (% change from a year ago) ———	+13	+9	-17	+15	+17

p. preliminary r. revised

on the book for next year. Production has been running at more than 1,000,000 a month.

3. The 90mm. antiaircraft gun is responsible for about 40% of the AA gun reduction. Requirements are down from 6,550 to 4,620. Only 600 are in the program for 1944, as compared with 2,400 as of August 1. The explanation here is tactical—we have shifted from the defensive to the offensive; therefore there is less need for AA guns. In accord with this, the 40mm. Bofors AA gun has been trimmed by 11% to 26,600 and the super-AA weapon, the 4.7-incher, by 29% to 710.

SOME UPS, MORE DOWNS

There were, of course, many ups. But the broad downward trend, which has persisted throughout the year, continued, and such exceptions as small arms and infantry weapons and signal equipment do

not disprove the rule. The March-to-October reduction in the two-year ASP for ordnance categories amounted to about 15%. By groups the changes were:

	% Change Mar.-Oct.
Combat vehicles.....	-23%
Artillery.....	-7
AA guns.....	-23
SA and infantry weapons.	+8
Ammunition.....	-21
Ground signal.....	+29
Aircraft ordnance.....	-14

The entire Army Supply Program (including various air, nautical, transport, and quartermaster items) dropped somewhat less—10% from March to October.

And there are likely to be more cuts—now that pipelines to battlefronts have been filled up, now that experience is providing a new gauge of expenditure.

CONFIDENTIAL

Nitrogen: Record Shot in the Soil

Though fertilizer was a problem six months ago, 50% reduction in military requirements and a sharper-than-rated rise in capacity bring windfall to agriculture.

SIX MONTHS AGO, agricultural authorities were wondering where nitrogen for fertilizer would come from (WP-Apr 9 '43, p10). Estimates were that nitrogen for the soil would fall below the five-year average. But today, the country is due for the greatest nitrogenous shot in the soil in history; 625,000 tons—some 35% more than ever before—will be available for fertilizer in the crop year ending June 30, 1944. This is due primarily to a cutback of about 50% in military requirements, secondarily to the unexpectedly rapid expansion in produc-

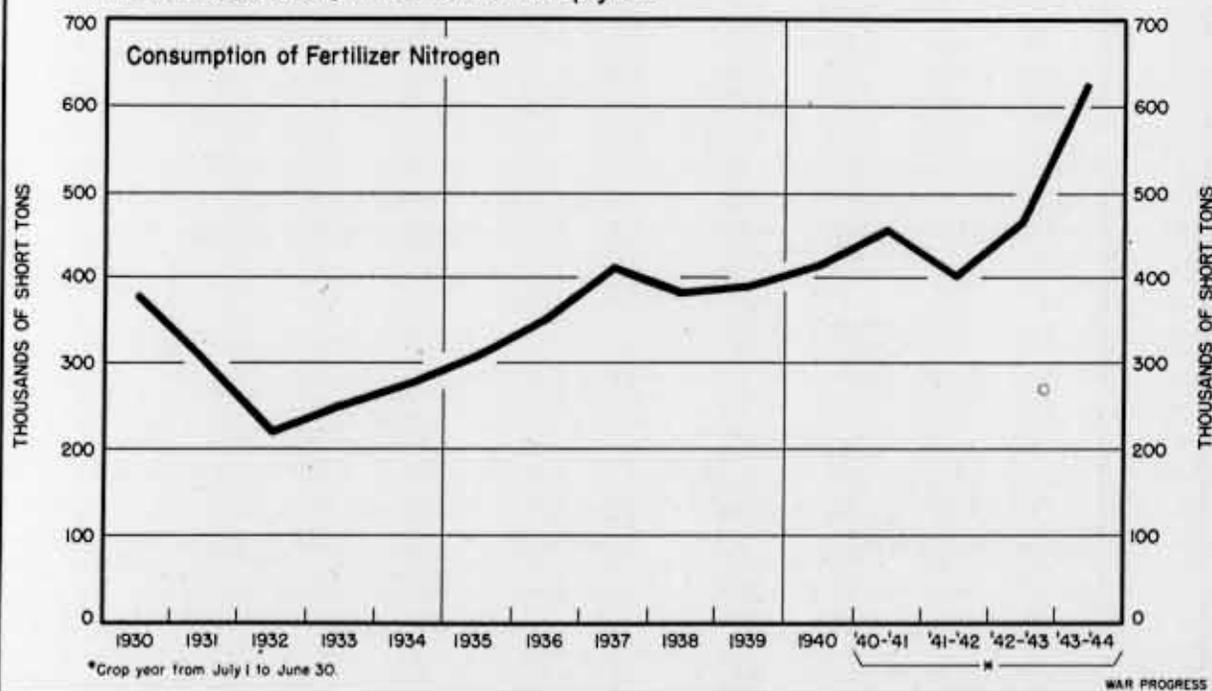
tion—new nitrogen plants are outdoing their original rated capacity.

In 1941, total U.S. supply of nitrogen for all purposes amounted to 793,000 tons. Most of this—52%—came from nine privately-owned plants which derived anhydrous ammonia (82% nitrogen) by subjecting burning coke to alternate blasts of air and steam; 25% from ammonium sulfate (20% nitrogen) derived from waste gases generated in coke-oven operations. Organics—dried bones, blood, cottonseed oil, etc.—furnished 4%. Less than 1% came from an Army ammonia plant. The rest—19%—was imported: nitrate of soda from Chile, calcium cyanamid and other nitrogen materials from Canada.

After Pearl Harbor, the Army—which

OUT OF THE GUNS, INTO THE SOIL

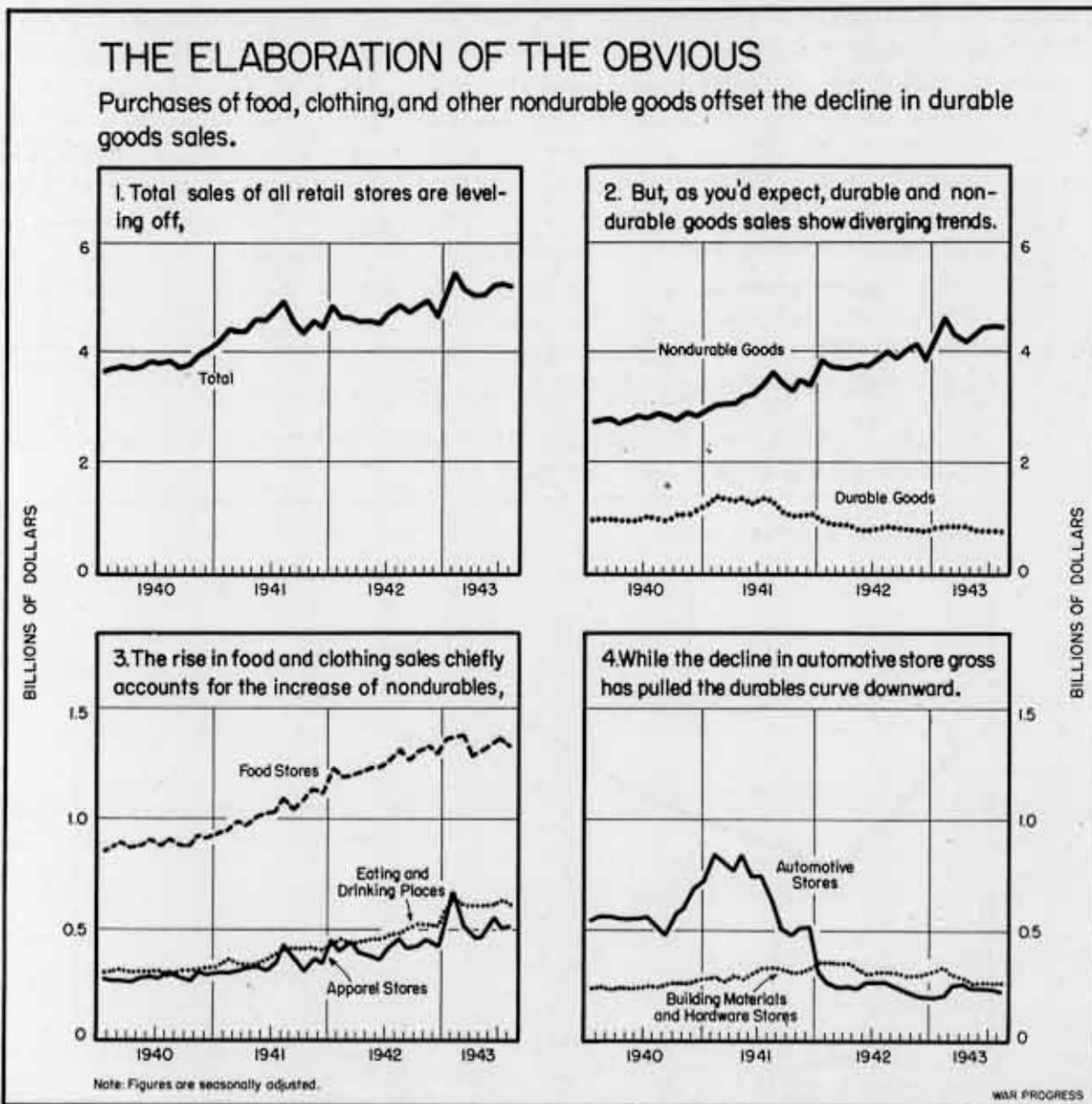
Cutbacks in military needs for explosives free nitrogen for fertilizer; consumption will increase 35% in the current crop year.



also produces explosives for the Navy —estimated nitrogen requirements for military explosives alone at 904,000 tons a year, and started to build nine anhydrous ammonia plants. Ammonia provides the most convenient source of nitrogen for explosives. In the meantime, the Army drew on the output of private plants and a Tennessee Valley Authority plant at Muscle Shoals for its immediate requirements. To help take care of increased agricultural and industrial needs (rayon, nylon, plastics,

film, etc.), the Defense Plants Corporation financed another with a capacity of 45,000 tons of nitrogen.

But the Army has since reduced its original estimate of nitrogen requirements; the number of anhydrous ammonia plants has been cut back from nine to seven. On September 18, the Requirements Committee approved a schedule of 390,000 tons of nitrogen for the year ending June 30, 1944. Even though acceleration in ammunition schedules and new military uses have recently resulted



in an upward revision of estimates—the latest figure is 466,000 tons—capacity of the seven plants to be operated will be ample, running to 532,000 tons. Some of this excess capacity is already being used to make ammonia for fertilizer.

WFA PREFERS CHILEAN

The War Food Administration, to carry out its agricultural program, wants to step up use of fertilizer from a past five-year annual average of about 410,000 tons of nitrogen to 700,000 tons. But WFA prefers Chilean nitrates to the ammonium nitrate that Army plants can produce; the latter is apt to cake after four weeks of storage. However, the Department of Agriculture and ammonium nitrate producers have developed anticaking agents. (Incidentally, when mixed with other fertilizer materials—such as phosphates and potash—ammonium nitrate doesn't cake.)

WFA wanted to keep this year's imports of Chilean nitrate at 1,000,000 tons—this would yield about 160,000 tons of nitrogen. However, the War Shipping Administration and the War Production Board shipping authorities could promise no more than 500,000 tons of shipping space. It takes 36 days more when ships returning from Australia are diverted to Chile, and then to the West Coast (the usual nitrate route); and 18 days more if ships unload at Atlantic or Gulf ports.

U. S. TAKES MIDDLE ROAD

This presented an international problem. The outbreak of war cost Chile its European markets and left the United States and Egypt as its major foreign customers. Pre-war U.S. imports averaged about 650,000 tons of nitrates annually. During the 1942-43 crop year, while the Army was diverting the nitrogen output of the private ammonia plants to explo-

sives, imports from Chile were stepped up to 1,000,000 tons. Chile would like to keep them at that level.

But Chilean nitrates, laid down at U.S. ports, cost about one-third more, on the basis of nitrogen content, than ammonium nitrate and ammonium sulfate. The price of Chilean nitrates to the farmers is cut by a Defense Supplies Corporation subsidy of \$6 to \$7 a ton.

The U.S. will buy 700,000 tons of Chilean nitrate this crop year but will import only 500,000 tons, leaving 200,000 tons to stockpile in Chile. This will save 500,000 tons of shipping space.

WFA has reduced its basic fertilizer requirements for the 1943-44 crop year from 700,000 to 625,000 tons of nitrogen. Nitrogen supply-demand position for the 1943-44 crop year now shapes up as follows:

<u>Sources of Supply</u>	<u>Nitrogen</u> (short tons)
Anhydrous ammonia.....	1,038,000
Army plants.....	532,000
Private plants....	434,000
TVA plant.....	50,000
DPC plant.....	22,000
Ammonium sulfate and other nitro- gen materials.....	227,000
Imports.....	169,000
Canada.....	87,000
Chile.....	82,000
Total supply.....	1,434,000

<u>Requirements</u>	
Military.....	466,000
Fertilizer.....	625,000
Industrial.....	270,000
Exports.....	37,000
Miscellaneous.....	20,000
Total requirements.....	1,418,000

Thus, as the situation shapes up today, there is a small statistical surplus, despite the large increase in fertilizer requirements.

War Progress Notes

THE SKY ISN'T THE LIMIT

RETAIL SALES may be hitting up against the ceiling. For the last three months they've been on a \$5,200,000,000 plateau; in August they even dropped slightly. Even so, they are close to the all-time scare-buying peak of February (chart, page 10). Durable goods sales show signs of having scraped bottom. The big drop in this category occurred in late 1941, when production of automobiles, refrigerators, etc., was curtailed. But the rise in food and clothing more than made up the decline. The following table indicates recent shifts in the distribution of retail sales:

Type of Store	% of Total Sales	
	1941	1943
Food.....	23.0%	26.0%
Eating & drinking...	8.4	11.8
Apparel.....	7.6	10.2
Hardware & building material.....	6.9	5.6
Gas stations.....	6.5	4.6
Automotive.....	15.2	4.5
Drug.....	3.4	4.3
Household goods.....	4.4	3.9
General merchandise.	14.5	15.8
All other.....	10.1	13.3
Total.....	100.0%	100.0%

TIME AND PAPER SAVER

WHEN the Army wants to know how much steel, copper, or aluminum is in a gear of a bulldozer engine subassembly, it asks the bulldozer builder for a bill of materials. The request passes down the line, from one subcontractor to the next, until it reaches the manufacturer of that particular gear. Yet, the same bill of materials might be in the files of another claimant agency, or of the War Production Board. Sometimes claim-

ants and Industry Divisions request bills for the same item.

From now on this will be changed. WPB has set up a clearing house—a central Bills of Materials Index File. Agencies and divisions will submit index cards for all B product bills of materials on hand and for new ones as they are received. The cards—over 5,000 so far, but destined to reach 30,000 eventually—will go into the central file, saving time, paperwork, and telephone calls.

REPORTS ON REPORTS

Consumer Services

Service trades establishments, such as laundries, restaurants, repair shops, and recreation facilities, are so small and localized that they are relatively ineffective in presenting their problems and views to government agencies which formulate controls. The Office of Civilian Requirements, in *Consumer Services* (confidential; pp. 11), therefore recommends a strong inter-agency Service Trades Committee (such as has recently tackled the laundry problem) for quick and coordinated action on manpower, materials, prices, and related problems, and it defines the responsibilities of the Office of Civilian Requirements, the War Manpower Commission, the Office of Price Administration, and other agencies on such a committee. (War Production Board, Civilian Requirements Policy Committee Document 4)

Soap, Lard, and Oils

Salvage fats have been accounting for 10% of all fats used in making soap and glycerin, but War Food Administration's proposal for a 28% increase in civilian soap production will require renewed efforts in the collection campaign. Larger diversions of lard and

SELECTED MONTHLY STATISTICS

Employment—Hours and Earnings—Transportation

	Latest Month*	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Same Month 1939	Same Month 1937
NONAGRIC. EMPLOYMENT—TOTAL (Thousands)							
Manufacturing—Total	38,263 ^P	38,241	38,364 ^R	38,115	38,348 ^R	30,717	n.a.
Durable Goods	16,207 ^P	16,245	16,136	15,958	15,233	10,489	n.a.
Nondurable Goods	9,643 ^P	9,650	9,617	9,415	8,515	4,542	n.a.
Government	6,564 ^P	6,595	6,519	6,543	6,718	5,947	n.a.
Other	5,824 ^P	5,767	5,848 ^R	5,855	5,520	4,032	n.a.
	16,232 ^P	16,229	16,380	16,302	17,595	16,196	n.a.
AVERAGE HOURLY EARNINGS (Cents)							
All Manufacturing Industries	96.5 ^P	96.3 ^P	95.9	92.4	87.0	62.4	n.a.
Durable Goods	106.0 ^P	108.0 ^P	105.4	102.0	96.9	68.8	n.a.
Nondurable Goods	81.1 ^P	80.5 ^P	80.3	77.3	73.0	57.6	n.a.
Bituminous Coal Mining	114.7 ^P	115.0 ^P	112.4	111.3	106.1	89.0	89.4
Metalliferous Mining	98.0 ^P	98.6 ^P	98.2	94.7	90.9 ^R	70.1	71.1
AVERAGE HOURS PER WEEK							
All Manufacturing Industries	45.0 ^P	44.4 ^P	45.1	44.5	43.0	38.1	n.a.
Durable Goods	46.8 ^P	46.0 ^P	46.8	46.2	45.3	38.7	n.a.
Nondurable Goods	42.4 ^P	42.1 ^P	42.7	42.0	40.2	37.8	n.a.
Bituminous Coal Mining	40.5 ^P	37.1 ^P	38.4	37.0	32.1	27.4	26.6
Metalliferous Mining	46.6 ^P	43.7 ^P	45.0	43.6	43.4 ^R	39.5	44.5
TRANSPORTATION—COMMODITY AND PASSENGER (1935-39=100)†							
Commodity	226 ^P	222	214	201 ^R	193	110	108
Passenger	209 ^P	206	196	192 ^R	190	110	107
	279 ^P	274	270	232 ^R	202	108	108

* Nonagricultural Employment, September; All Other, August.
 P Preliminary. R Revised. n.a. Not available. † Unadjusted.

edible vegetable oils to soapmaking will also be necessary; *Fats and Oils* (confidential; pp. 16) reports that lard output is 15.6% higher than last year, while the 1943-44 crop year estimates for the major edible vegetable oils—cottonseed, soybean, and peanut—indicate a 6.7% increase over 1942-43.

(Department of Commerce, Bureau of Foreign and Domestic Commerce)

Planning Beats Publicity

A clear and integrated plan for appraising manpower requirements and utilizing manpower reserves would be more effective in recruiting workers than all the "hoopla and hurrah" publicity. This is the consensus of panels of clergymen, small business men, editors, and labor editors as summarized in *Manpower Problems Raise Questions* (restricted; pp. 18). The government must dispel skepticism and confusion about urgent

manpower needs by taking measures against labor hoarding and tackling community-facility problems.

(Office of War Information, Bureau of Special Services)

Latin-American Rice

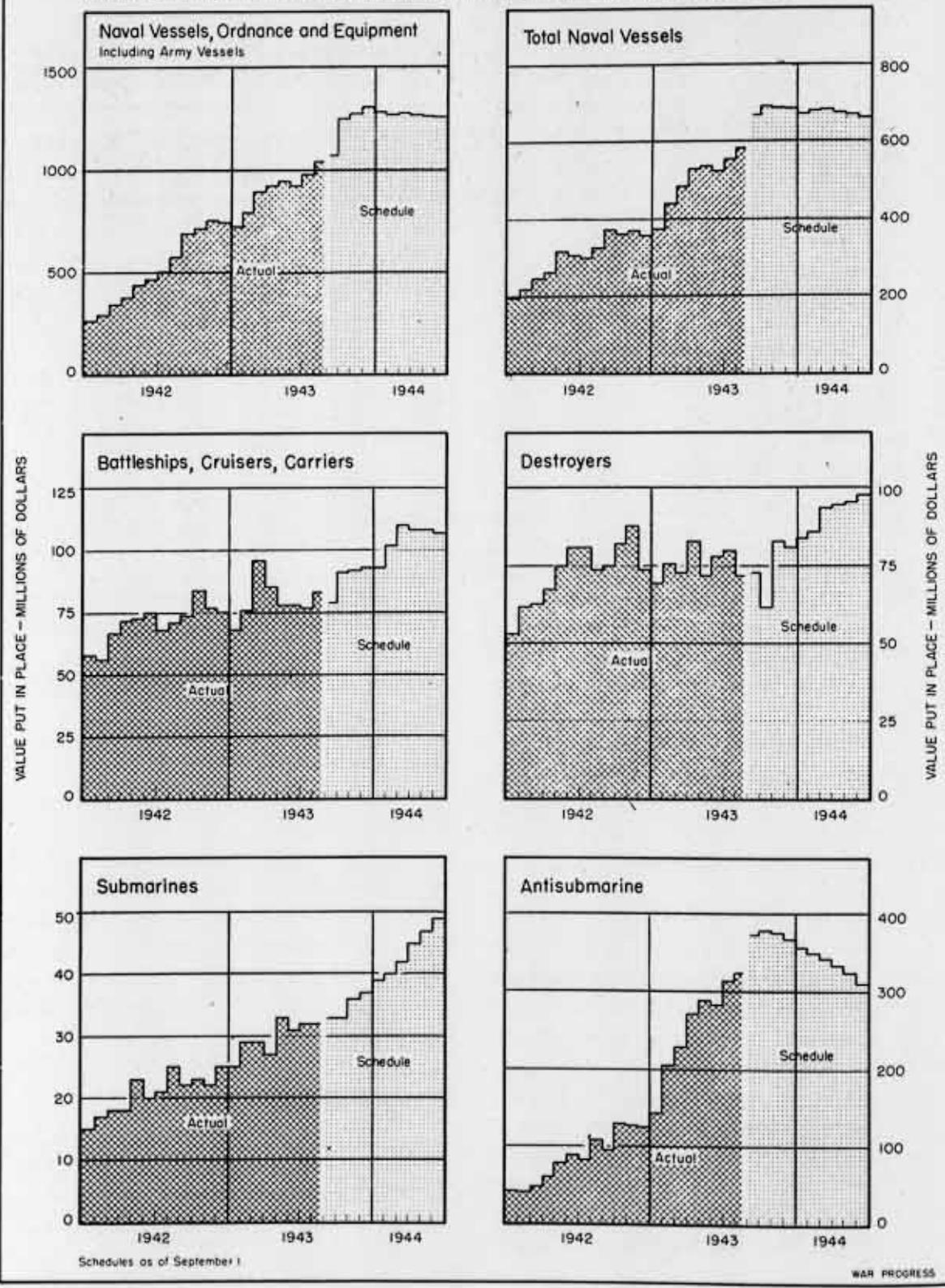
The war has made Latin America nearly self-sufficient in rice. Net imports, according to *Rice* (confidential; pp. 17), fell from 17% of total consumption in 1935-39 to 2% in 1942; at the same time, domestic production rose 27%. Reason: the loss of Far Eastern sources of supply and a resultant doubling of the price since 1939.

(Coordinator of Inter-American Affairs, Research Division)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

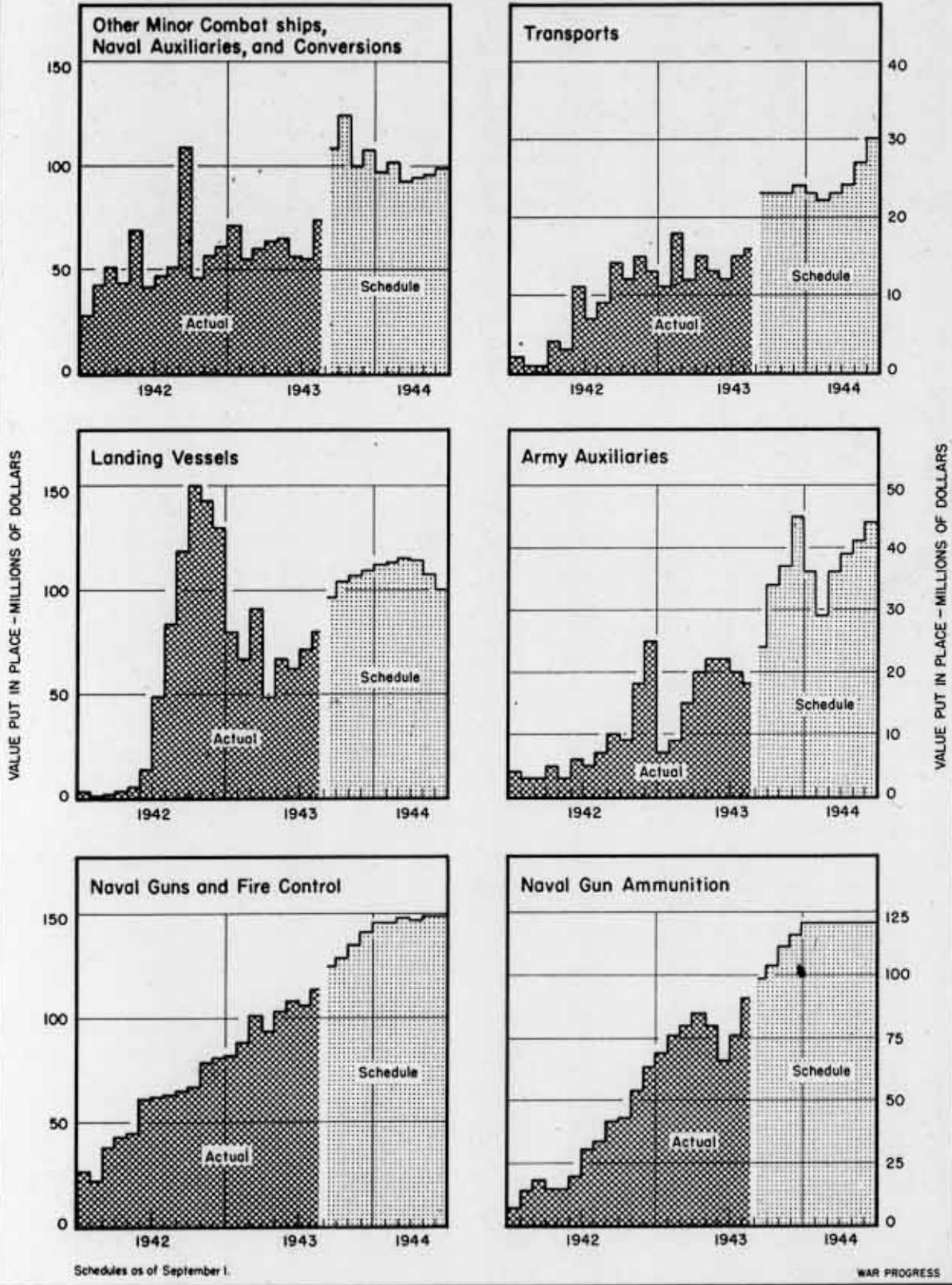
PRODUCTION PROGRESS

Naval Vessels, Ordnance and Equipment; Army Vessels; Merchant Vessels



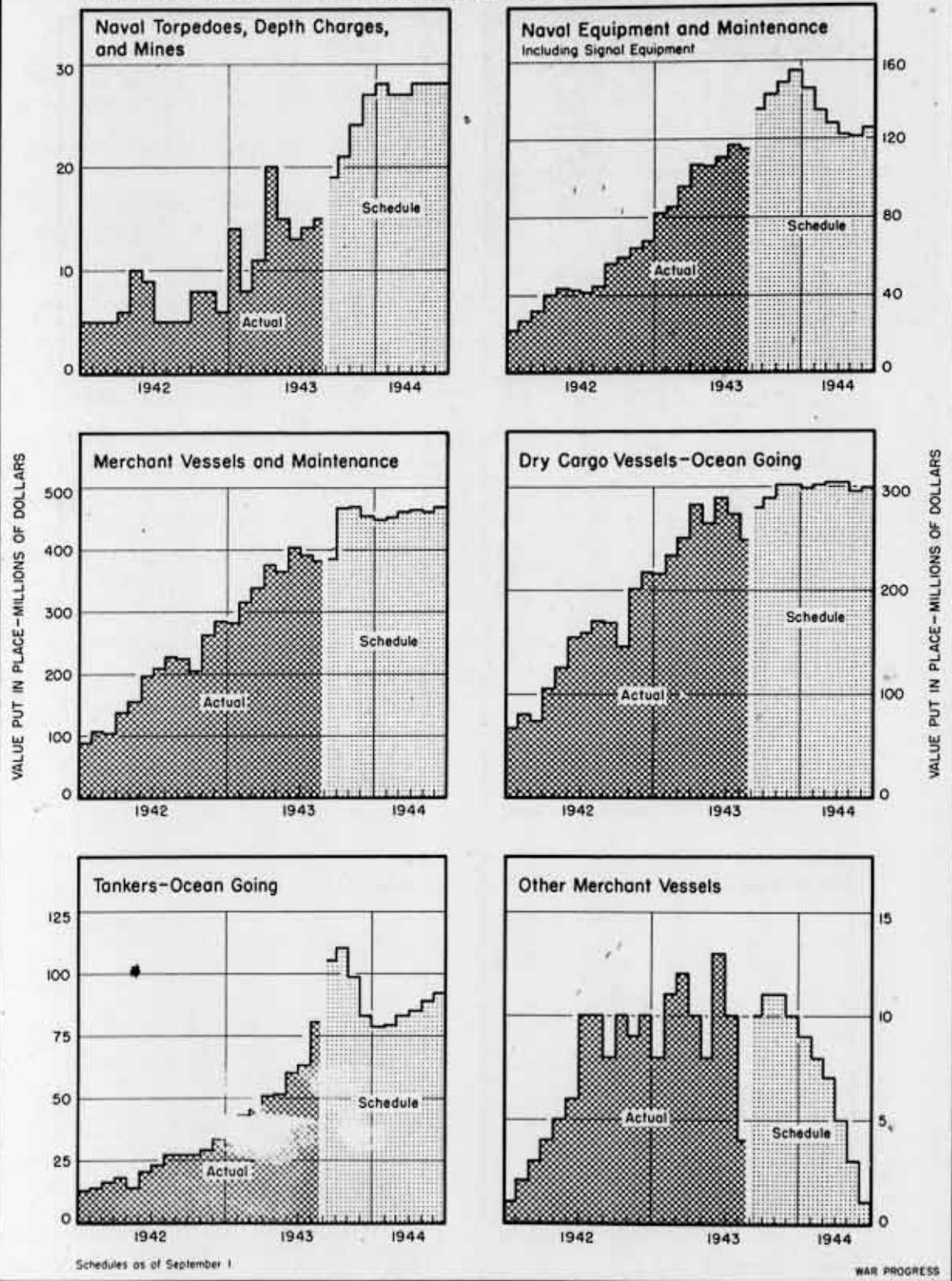
PRODUCTION PROGRESS

Naval Vessels, Ordnance and Equipment; Army Vessels; Merchant Vessels



PRODUCTION PROGRESS

Naval Vessels, Ordnance and Equipment; Army Vessels; Merchant Vessels



The President

1

WAR PROGRESS

Confidential

DECLASSIFIED
E.O. 11652, Sec. 3(E) and 5(D) or (M)
Commerce Dept. Letter, 11-15-72
By RHP, Date MAR 29 1973

Meeting the Manpower Problem

Bottoms Up

More Landing Craft

Number 163

October 30, 1943

There's Method in this Manpower Method

West Coast plan succeeds in cutting down shortages and lifting output. A local problem, labor is given local treatment. Boeing's a special case in point.

BOEING IN SEATTLE, volume producer of the Flying Fortress, has probably been the most publicized example of a plant hit by labor shortages. With the exception of June, payrolls decreased in every month between January and August, 1943. During that period, output fell 120 planes short of first-of-the-month schedules.

Part of the trouble was wages—workers were drifting from Boeing to higher-paying shipyards. But, early in September, the War Labor Board granted a wage increase, thus taking the edge off the differential. On top of that, the West Coast Manpower Program went into operation. This month is the payoff. Employment at Boeing has gone up 2,000 since the end of August, from 29,000 to 31,000. Production of Flying Fortresses at the Seattle plant has been running more than 20% ahead of September and acceptances bid fair to exceed the former monthly high of 200.

EPITOMIZES SQUEEZE

The Boeing case epitomizes the manpower squeeze along the entire Pacific Coast, just as the Pacific Coast, in turn, epitomizes the squeeze in all areas in which the concentration of work is far greater than normal. It is this concentration that the new West Coast plan is designed to alleviate.

Consider the Pacific Coast. The three states of California, Washington, and Oregon comprise approximately 8% of the

nation's population. Yet they account for about one-fourth of all aircraft output, one-half of all lumber production, and one-third of all shipbuilding and ship-repair activity in the United States. These three states also account for more of the food processing, canning, and light metal output—aluminum and magnesium—than any other region in the United States. And they are the site of a number of the more important military and naval installations in the country. As a result, the Pacific Coast is the most critical war production area in the country.

FIRST RETURNS ARE GOOD

Six weeks ago, it was estimated that the Pacific Coast would require 500,000 additional workers to meet production schedules over the coming fall and winter, against an indicated new supply of somewhat less than half that number. But today, as a result of the new manpower plan, this requirement is down about a third. Aircraft contracts have not been canceled. Nor have shipyards closed down. This cutback in requirements is traceable to the West Coast Manpower Program. And how it came about is summed up by what happened first in the Portland area, then throughout the Pacific Coast over the succeeding month and a half.

As in the four other areas into which the Pacific Coast had been divided under the plan—Seattle, San Francisco, Los Angeles, and San Diego—Portland's labor budget was out of balance; the demand for workers far exceeded supply. The immediate task before the newly organized Area Production Urgency Com-

mittee—chairmanned by a War Production Board representative and including one representative each from the Army, Navy, Maritime Commission, War Manpower Commission, Aircraft Resources Control Office, War Food Administration, etc.— was to determine relative production urgencies in the area. And that determination would be made under the guidance of WPB's Production Executive Committee in Washington, which would have the final word as to what production was most important from a national point of view. From there on, it was up to a complementary body, the WMC-chairmanned Area Manpower Priorities Committee, to carry on—to see that workers were directed into the high-urgency plants.

HOW THE PROGRAM WORKS

The manpower committee's first step was to set a general employment ceiling. The size of payrolls was frozen at the July 1, 1943, level with only three specific exceptions for special reasons; Kaiser at Vancouver, working on aircraft carriers, was the most important of these. Result: the demand for workers

at the U.S. Employment Service promptly dropped by 56,000; more effective utilization of labor was depended on to attain scheduled production.

But employment ceilings alone were not enough. Once it was established that troop transports, say, represented a top production urgency around Portland, then it was necessary to see that shipyards building troop transports would be able to maintain their working force at the stated ceiling; in other words, at the estimated minimum needed to maintain production schedules. So the Area Manpower Priorities Committee took a further step: it introduced the principle of "controlled referral," the method of channeling manpower developed in Buffalo (WP-Aug21'43,p3).

Thus, no longer can all employers around Portland "hire at the gate"; and the same now applies to the entire Pacific Coast. Conversely, no longer are workers in California, Oregon, and Washington completely free to choose their place of employment. A machinist cannot drift willy-nilly from an aircraft plant, say, to one machining ordnance, especially since ordnance's urgency rating is below that of aircraft, as well as of ship repair, shipbuilding, high-octane gasoline, radio, and radar.

IN THIS ISSUE:

THERE'S METHOD IN THIS MANPOWER METHOD . . .	1
KEY STATISTICS OF THE WEEK	5
MERCHANT SHIPS: FROM DEBIT TO CREDIT . . .	7
SOME UPS, MORE DOWNS IN ARMY PROGRAM . . .	9
MORE OFFENSIVE	10
SELECTED MONTHLY STATISTICS	12
REPORTS ON REPORTS	12

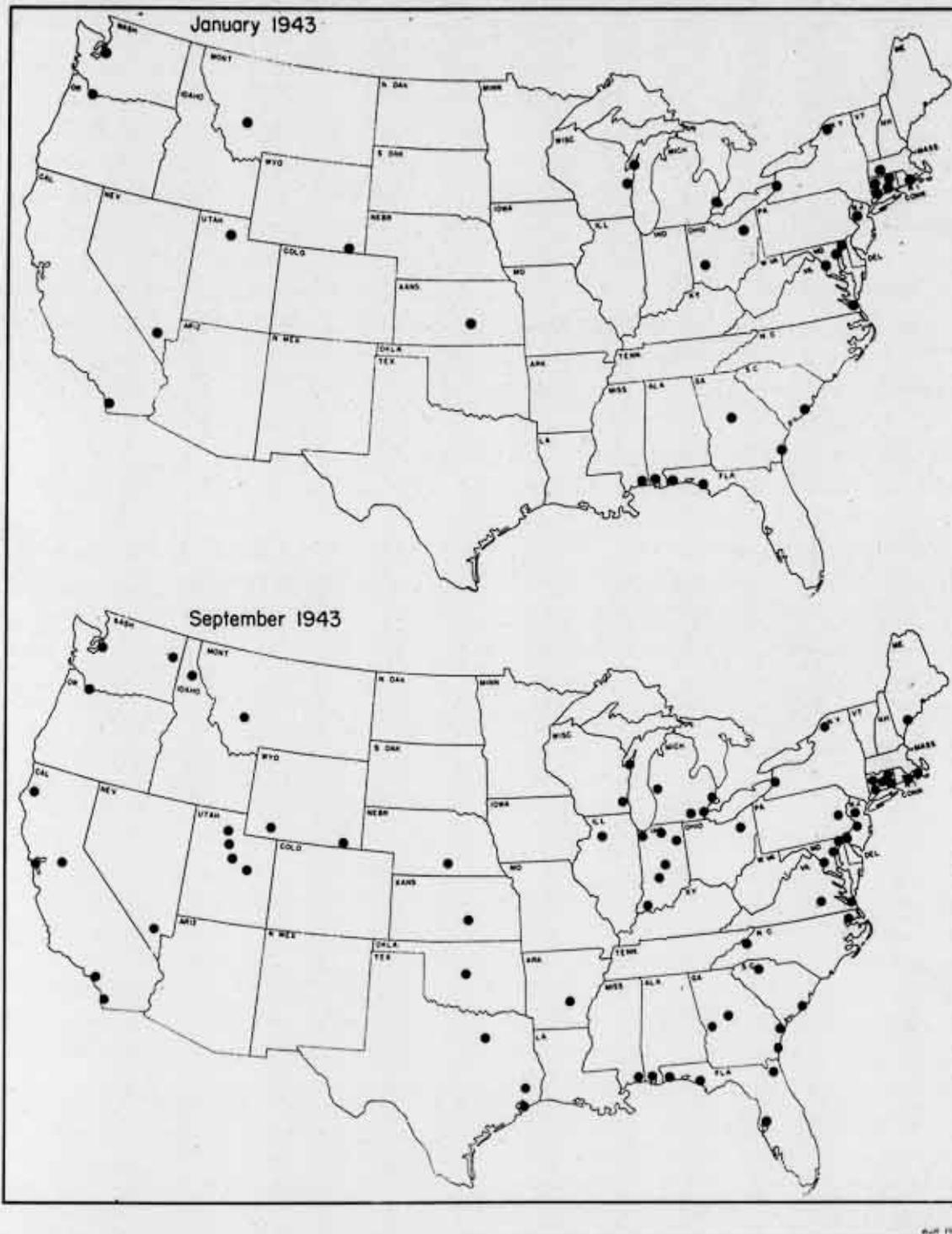
SQUARE PEGS, SQUARE HOLES

Under controlled referral, the job-seeking machinist reports to the U.S. Employment Service—or to any other agency operating under prescribed standards, such as a union hiring hall—which refers him to a job in which his skill will most further the overall plan of war production as determined in Washington by the Production Executive Committee.

But, as in Buffalo, Akron, Detroit, and Hartford, where job referral is formally tied in with production urgency

MAPPING THE MANPOWER CRISIS

The number of critical (Group I) labor areas has doubled since the start of the year.



These two maps are a clear indication of the geographical struggle for manpower. Indiana, for instance, which had no critical areas back in January, now has six. Many other states—Maine, Nebraska, Texas, etc.—have at least

one critical area, where they had none before. And the doubling of the number of areas classed as critical throughout the country is a partial explanation of recent difficulty in pushing up production to higher levels.

CONFIDENTIAL

ratings, the mere fact that a Pacific Coast firm is a No. 1 production urgency plant does not mean it automatically becomes a No. 1 priority plant for manpower. The chief need may be materials, components, or facilities, not labor. Indeed, it may have too much manpower; a recent review of requirements under the West Coast program showed that navy shipyards around Seattle were overstaffed by 10%.

BALANCING THE LABOR BUDGET

Or maybe it has no manpower problem. In the Los Angeles area, aircraft is a top urgency, but three major plane plants have no manpower shortage. Douglas at El Segundo and Vega at Burbank have been able to attain their scheduled peak output; and Douglas at Long Beach currently has more than enough workers to carry it through at least another six months of its slowly rising schedule.

The West Coast program, however, does not stop with the establishment of production urgencies, manpower ceilings, and controlled referral. Keeping the labor budget in balance involves more than that. All contracts—new as well as old—are reviewed locally by the Area Production Urgency Committees. A contract to build an ice breaker in the Los Angeles area was approved only after the Navy showed that workers freed by the cancellation of contracts for 21 destroyer escort vessels could be used, thus avoiding an increase in the labor force. Similarly, before the Army Air Forces were permitted to close a large contract for calculating machines, they had to arrange for a transfer of ordnance production then in the manufacturer's plant so as to raise the necessary manpower.

In reviewing contracts, special considerations frequently arise. There's the case of a window-screen company in

Berkeley whose contract for fragmentation bombs was up for renewal. This was distinctly low-priority production in the San Francisco area and it could be done in a less critical region. Nevertheless, the APUC ratified the contract—most of the 40 employees (including 32 women) were old and not suitable for transfer; moreover, the company's facilities were not particularly adaptable to higher priority work, such as aircraft and shipbuilding. In another case, the Navy wanted to place a contract for steel ammunition boxes in a West Coast plant; destination was the Pacific theater. At first, the committee sought to place the business with a company in Youngstown, a Group II labor area; but transportation from Youngstown to the West Coast would delay delivery beyond the Navy's shipping date. So the request was granted.

FREEING MORE MANPOWER

Procurement agencies, however, do not always present briefs for contracts. In San Francisco, more than a dozen ordnance, quartermaster, and chemical warfare contracts have already been canceled, thus releasing an estimated 3,000 persons for more essential munitions output. Parenthetically, the Production Executive Committee may override a local decision to throw a contract out of the area if strategical or technical reasons are paramount; contracts for a secret chemical works may be at stake, or a West Coast plant may be the only one capable of doing a particular job. In such a situation, however, an equivalent amount of work is expected to be withdrawn from the area.

Just as the area committees' review of contracts assures control over local labor budgets, so does their jurisdiction over new facilities. When a former ship operator wanted to build a

KEY STATISTICS OF THE WEEK

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
War program—Checks paid (millions of dollars) -----	1,616	1,600	1,380	1,452	1,354
War bond sales (millions of dollars) -----	142	470	886	413	188
Wholesale prices (1926=100)					
All commodities -----	102.9 ^p	102.9 ^p	102.9 ^p	103.4	99.7
Form products -----	122.7	122.8	123.8 ^p	123.9	108.7
Foods -----	104.8	104.7	104.9	108.5	103.1
All other than farm products and foods -----	97.5 ^p	97.5 ^p	97.4 ^p	96.8	95.6
Petroleum:					
Total carloadings -----	53,903	53,449	53,414	56,191	54,737 ^a
Movement of cars into the East -----	24,303	25,008	23,979	29,757	27,675
East coast stocks for civilian use (1940-41=100 Seas. Adj.) -----	48.9	48.0	43.0	27.7	56.1
Total stocks of residual fuel oil (thousands of barrels) -----	64,747	65,518	66,659	67,455	79,142
Bituminous Coal:					
Production (thousands of short tons, daily average) -----	1,958 ^p	2,008	2,008	2,003	1,926
Exports (no. of freight cars unloaded for export Friday, excl. grain)					
Atlantic Coast ports -----	2,423	2,505	2,678	1,816	1,430
Gulf Coast ports -----	420	347	368	370	323
Pacific Coast ports -----	1,288	1,284	1,448	1,080	807
Steel operations (% of capacity) -----	100.6	100.7	100.8	100.0	101.1
Department store sales (% change from a year ago) -----	+ 12	+ 13	+ 2	+ 29	+ 18

p. preliminary r. revised

hangar at Mills Field to modify navy planes and transfer 150 men from ship repair to do the work, the San Francisco Area Production Urgency Committee turned thumbs down. But when an aviation-gas plant extension requiring 3,000 workers was proposed for Richmond, Calif., the same committee approved—and for two reasons: (1) aviation gas had a high-urgency rating in the area; (2) the extension had to be near existing refinery facilities.

CIVILIANS NOT FORGOTTEN

In another instance, this time in Portland, an expansion of local ice and cold-storage services was approved, even though the builder's labor force might have to be increased to do the job. Here the idea was to keep an essential civilian activity going—something which will loom larger on area committee dockets as time goes on. Indeed, all Area

Production Urgency Committees on the Pacific Coast are now working with the Office of Civilian Requirements to adjust civilian production and services throughout the region. So far, it has been tentatively agreed that manufacturers of civilian-type items such as the following are entitled to some sort of preferred treatment under the West Coast program:

- Biologicals
- Cordage
- Food containers
- Matches
- Orthopedic appliances
- Optical goods
- Shoe repair machinery
- Surgical, dental, & medical supplies
- Work clothes & work gloves

By the same token, establishments now doing nonessential work may be converted entirely to war production or

moved out of the West Coast, thus releasing workers for munitions output. Right now, for example, the case of a large knitting mill is being studied: an estimated 60% of its 1,000 employees are working on quartermaster supplies, such as uniforms for ski troops, but 40% are making civilian bathing suits and sweaters.

SHARING THE CONTRACTS

What to do with civilian production and services is only one of the problems slated for extended treatment under the West Coast plan. Because the Pacific Coast area has never been highly industrialized, subcontracting by airplane plants in California and Washington has been consistently below the industry average. One part of the problem is to increase subcontracting by pulling low-urgency commitments out of metal-working plants or by using facil-

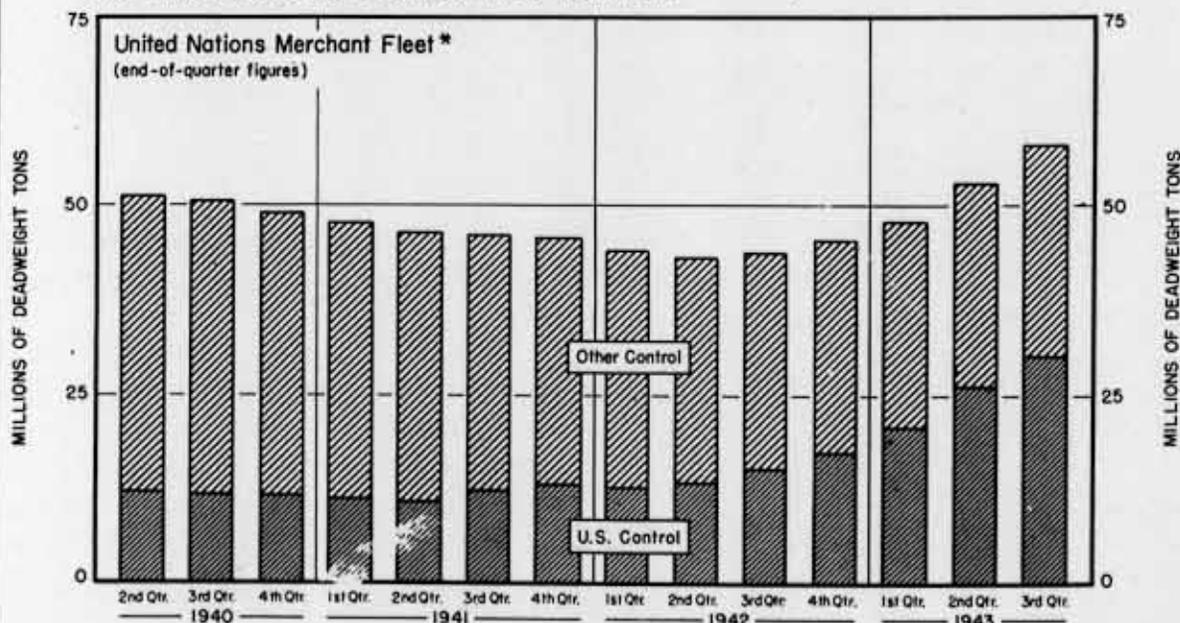
ities which have been freed by program cutbacks. Thus the Pacific Car & Foundry Company in Renton, Wash., formerly making tanks, is now making parts and subassemblies for Boeing.

The other part of the problem is to use facilities outside the Pacific Coast. To this end, the number of machine-tool companies already doing aircraft subcontracting, such as Warner & Swasey (aircraft engine parts), Cincinnati Milling (airplane propellers), and Kearney & Trecker (wing parts), may be expected to increase—particularly since machine-tool orders are still declining. Above all, an objective of the plan is to do away with such uneconomic procedure as in the case of a California bomber plant which obtained aluminum forging stock from an eastern plant, had it rough-forged in California, then sent it back East for final machining.

The West Coast program was put into

BOTTOMS UP

United Nations merchant fleet is at the highest level since the fall of France. And the United States now controls more than half.



* Includes merchant ships of fighting forces, and neutral ships available to the United Nations.

WAR PROGRESS

CONFIDENTIAL

effect on a first-things-first basis, leaving many loose ends to be tied up later; establishment of more detailed employment ceilings, extension of controlled referral to all industries, and the question of putting women under the referral system are typical. Interestingly enough, while the West Coast plan does not exclude job referral for women—as in Buffalo—whether or not they will eventually be included depends in part on the ability of USES offices to build up personnel and in part on the decisions of individual area committees.

LOCAL BOYS MAKE GOOD

The West Coast program—like the Buffalo plan—is logic in action. Although manpower statistics for the country as a whole reveal no extreme overall shortage, the fact remains that la-

bor shortages are primarily local problems and must be handled locally, on a pragmatic basis.

When specific demands for labor in specific localities outstrip the supply, then either (1) manpower must be moved into the area, (2) contracts must be withdrawn, or (3) labor must be channeled to the most urgent production. These procedures call for on-the-spot knowledge of what contracts are placed in the area, what types of plants there are, how they can be utilized for other work, to what degree subcontracting can be expanded, and so forth.

The West Coast plan utilizes all of these local procedures for making the most of a limited supply of workers. And so do plans now in operation in Akron, Hartford, and Detroit. Others are sure to follow.

Merchant Ships: From Debit to Credit

Increased U.S. construction, decreased sinkings result in favorable United Nations balance sheet, and available export space virtually meets demand.

THE UNITED NATIONS merchant fleet is at its highest level since the start of the war (chart, page 6). And each month that goes by—with construction of both dry cargo vessels and tankers outstepping sinkings—carries it higher. Three dates are significant in the fleet's history—June, 1940, when France fell; August, 1942, when sinkings cut the fleet down to its lowest level; and today:

<u>Date</u>	<u>Size of Fleet*</u> (dwt. tons)
June, 1940.....	51,000,000
August, 1942.....	43,000,000
September, 1943..	58,000,000

*Includes military and neutral ships

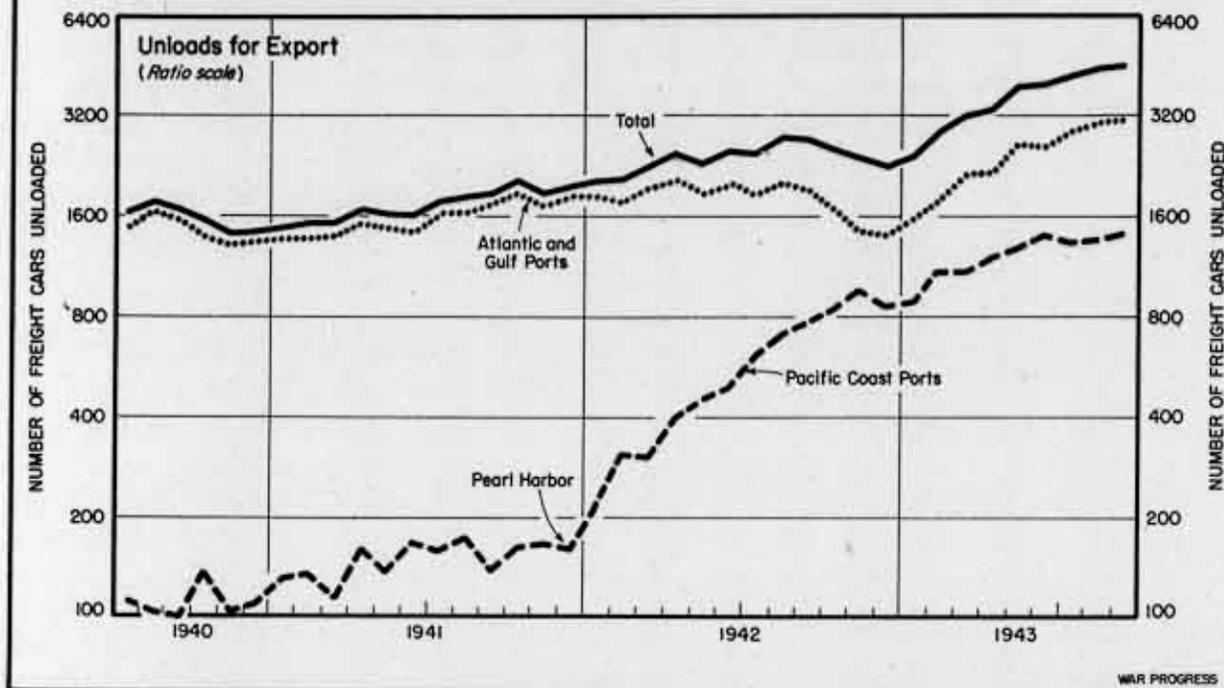
As a result of this 35% increase in 13 months, ocean-going shipping is considerably less tight than it was—this despite the fact that U.S. and Canadian munitions production today is almost twice what it was a year ago, and hence far more goods are moving into ports for shipment abroad (chart, page 8).

CARGOES GETTING THROUGH

This better-balanced position, however, has been of comparatively short duration. Shipping available to the United Nations declined almost uninterruptedly from the fall of France to August, 1942; in those 26 months, some 20,000,000 deadweight tons were lost, nearly twice what was added. The first eight months of 1942 were particularly punishing; 8,000,000 deadweight tons were lost. But after August, the trend shifted. Construction continued to expand each month. In the spring of this

DOWN TO THE SEA IN FREIGHT CARS

Volume of goods moved to port for shipment abroad is at a wartime high. Pacific coast shows steep rise since Pearl Harbor.



year, the success in fending off submarines through aircraft carrier escorts, land-based planes, and destroyer escort vessels became increasingly apparent. Not only are more cargoes going abroad, but an increasing proportion are arriving at their destination.

U. S. BUILDING 90%

The preponderant factor in this improvement in shipping's supply-demand situation was U.S. construction which rose from 73,000 deadweight tons in December, 1941, to more than 1,500,000 tons a month today; it now constitutes about 90% of monthly United Nations construction.

The U.S. fleet itself has risen from 15,000,000 tons a year ago to 30,000,000 deadweight tons today and constitutes more than half of the United Nations fleet. Indeed, if the U.S.-controlled fleet were excluded, the balance of the

United Nations merchant tonnage would be only slightly above the low point of this summer.

The growth of this country's fleet shows up on both the import and export side of the shipping ledger. A year ago, there was barely enough room in ships coming to the United States to carry the full requirements of such critically wanted imports as copper, tin, zinc, and other essential items granted A-1, A-2, and A-3 shipping priorities. Many B-priority products such as coffee, sugar, cocoa, never met their quotas. Ships were so urgently needed for outward bound U.S. cargoes that time could not be spared, on their homeward runs, to send them on circuitous routes to pick up imports.

Today, the situation is radically reversed. At the beginning of the year, the country's stockpile of coffee amounted to a two weeks' supply; now, stocks

amount to a half-year's consumption. In addition, numerous products such as linseed, flaxseed, tankage, etc., are now being imported. The statistical proof of the reversal is that A-priority quotas are being filled in virtually all cases; exceptions take place when the product—not the ship—is unavailable in foreign ports. And during the first six months of this year, B quotas were not far from being filled, even on the lower rated B-3 items.

TAILOR-MADE EXPORTS

Export space, however, is just about in balance. Military and lend-lease

quotas are being met, but other exports—such as those to Central and South America—still must be tailored to fit into the available amount of ships.

ALL SHIPPING INCREASING

But last year, when we were producing much less munitions than today, only the military items could be fully moved; now lend-lease shipments, and exports of essential goods to South America can be delivered according to program. And there have been times when ships left port without being completely loaded. These instances primarily are indications of temporary shortages at ports or of

SOME UPS, MORE DOWNS IN 1943-44 ARMY PROGRAM

Extensive changes have been made in the two-year ordnance requirements between March 1 and October 1. Here are some of the more important ones:

INCREASES

Fragmentation bomb, parachute, M72*	193 %
.30-cal aircraft machine gun	158
Fragmentation bomb, M4	78
.30-cal AP cartridge	58
1-1/2 ton truck, 4x4	10
76mm AT gun shot, APC	7

DECREASES

DOWN 0 TO 24%

Carbine	4 %
3-in. gun motor carriage	7
.30-cal tracer cartridge	12
Personnel carrier, M3 & M5	13
105mm HE shell, M1 (M3 howitzer)	13
90mm HE shell	15
Personnel carrier, M2 & M9	17
.50-cal incendiary cartridge	19
Medium tank	20
57mm tank gun shot, APC	24

DOWN 25 TO 49%

.30-cal machine gun, M1919A4	35 %
75mm shot, APC	39
Mine, HE, AT	39
90mm AA gun	39
Light tank	41
20mm AP cartridge	41
Medium armored car	43
75mm HE shell, supercharge, M48	43
100-lb GP bomb	44
20mm aircraft gun	44
500-lb GP bomb	48

DOWN 50% OR MORE

Scout car	51 %
1000-lb GP bomb	51
2000-lb GP bomb	53
.30-cal ball cartridge	53
.50-cal AP cartridge	56
1000-lb SAP bomb	62
3-in. AA gun shell	71

* Introduced into program May 1

WAR PROGRESS

Since March 1, overall Army requirements for 1943-44 have been trimmed 10%, including the 2% cutback in August and September (WP-Oct 23-'43, p 6). Ordnance reductions were proportionately greater—15% since March and 4% since

August. And a comparatively few items such as those above—running heavily to ammunition, combat vehicles, and antiaircraft—dominated March-to-October changes in requirements for 1943-44. Most major revisions were downward.

CONFIDENTIAL

failure of expected consignments to arrive on time. A year ago shipping space was so tight that such temporary shortages of cargo practically never occurred. But the improvement in the United Nations shipping outlook cannot be measured in sinkings and construction alone. The opening up of the Mediterranean cut down the turnaround time of exports to the East and thereby added to the effective size of the merchant fleet.

In the meantime, the improved shipping situation shows up in the statistics. During the last year ocean-going shipments to U.S. allies have risen due (1) to increased production and (2) to the larger merchant fleet, as follows:

	2nd Q. of '42	2nd Q. of '43	% Increase
(000 long tons)			
U.K.	2,802	4,654	66%
Russia	721	918	27
All other	2,894	3,188	11
Total	6,407	8,760	37%

Last year, Russia—which had top priority alongside of our military—could have handled more goods. So far this year, however, the routes to Russia have been fully occupied. Interestingly, much of the increase to the United Kingdom is now being carried in American bottoms, because of the loss of British ships.

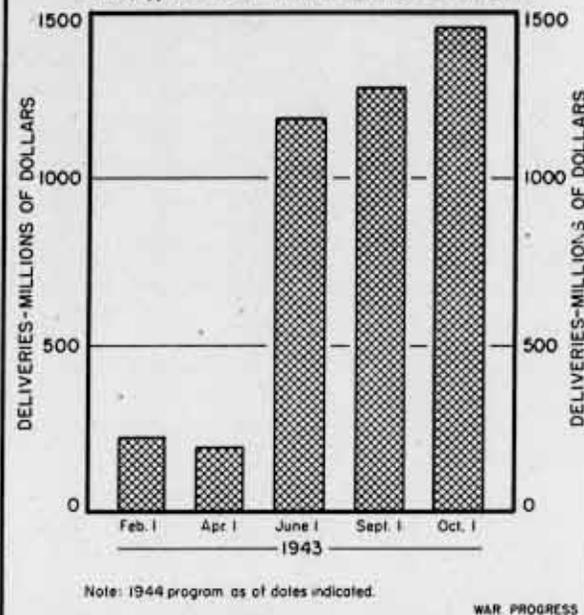
More Offensive

Navy's October 1 schedules step up landing vessel program; later schedules are expected to speed it up still further. DEs and patrol craft are cut back.

THE OCTOBER 1 revision in the Navy's construction program re-emphasizes the trend away from the defensive and toward the offensive. Thus the landing vessel program goes up, but destroyer escorts and patrol craft are cut back. Other

SHIPS FOR INVASION

New landing vessel program for 1944 up sharply, is almost 8 times as large as in April



categories remain pretty much the same. The shift in the total program, covering deliveries (in thousands of displacement tons) for the period from July 1, 1940, through 1947, is as follows:

	Sept. 1 Schedule	Oct. 1 Schedule	% Change
Big ships*...	3,114	3,178	+2
Destroyers...	1,168	1,168	0
Submarines...	582	582	0
Destroyer escorts.....	1,627	914	-44
Carrier escorts.....	668	668	0
Landing craft	2,892	4,078	+41
All others...	2,387	2,204	-8
	12,438	12,792	+3

*Battleships, cruisers, carriers

Altogether almost 100,000 landing vessels are in the program, with a valuation of over \$6,000,000,000. And though most of the additional construction won't show up until 1945 and after, the stepup takes effect almost at once

CONFIDENTIAL

(chart, page 11). At present, some \$1,-461,000,000 worth of landing vessels are slated for delivery in 1944, as against \$1,279,000,000 under the old schedules—a boost of 14%. However, later schedules are expected to accelerate this increase.

All the major types figure in this increase, from the big 1,490-ton LSTs (landing ship, tank) to the 5.8-ton LCVPs (landing craft, vehicle and personnel). Biggest jump is in the LCTs (landing craft, tank), which in 1944 go up 240% over the September schedule.

FULL STEAM AHEAD

In the light of the past production record, the prospects for meeting the new schedules look good. In February, deliveries of landing vessels reached a monthly peak of \$155,000,000—which is higher than the peak monthly rate in

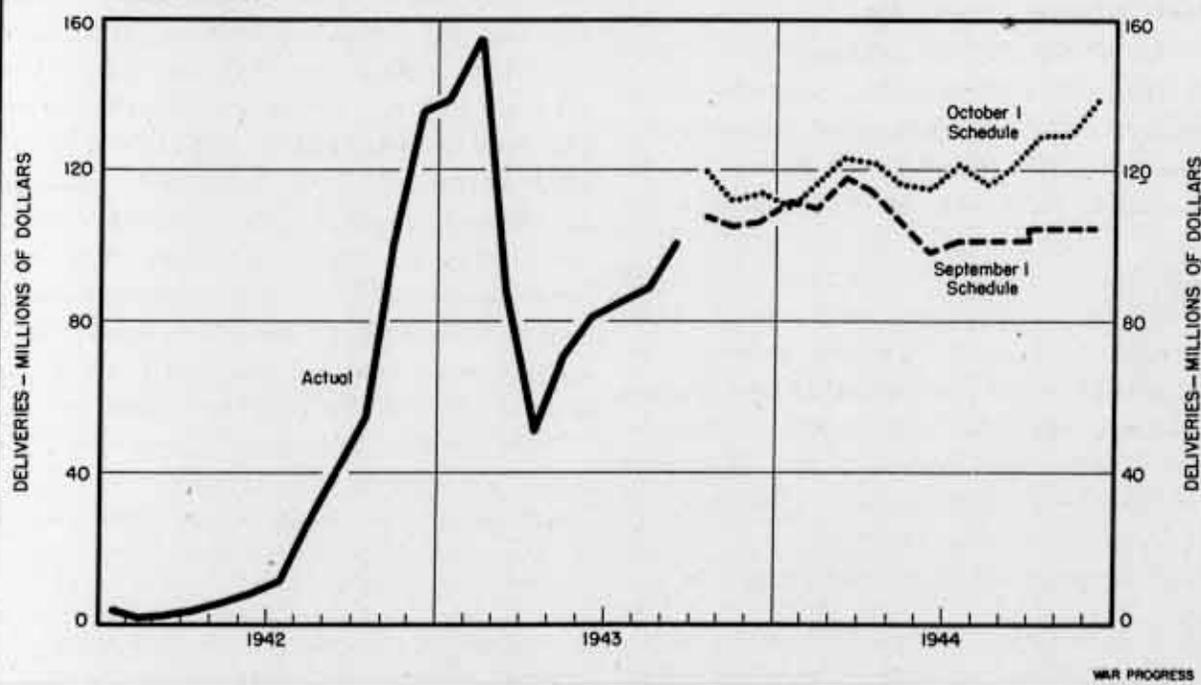
the October 1 schedules. Recent deliveries, moreover, have been good. In September, all high-preference types of landing vessels ran ahead of schedule except one—landing craft, infantry (large)—and this was right on schedule.

UNDERScores TREND

The destroyer escort program has also been stepped up for the rest of 1943, but simply because of the momentum it has already picked up; in 1944 schedules will drop at least 26%, from \$2,-861,000,000 to \$2,116,000,000, and probably more (WP-Oct23'43,p5). Some of the more important types of patrol craft programs—such as the PCE 180s and PCS 136s—go into a still steeper decline, from \$455,000,000 to \$308,000,000. The reduction in this category is not large or significant by itself, but it underscores the trend toward the offensive.

MORE LANDING VESSELS

October 1 schedule raises next year's ante, and pushes the 1944 peak from March to December.



SELECTED MONTHLY STATISTICS

Production Index* - Food Production - Employment

	Latest Month**	Preceding Month	2 Months Ago	6 Months Ago	Year Ago	Some Month 1939	Some Month 1937
PRODUCTION INDEX- INDUSTRIAL (1935-39=100)†							
Total Manufactures	247 ^r	244	241	232	213	119	118
Durable	266 ^r	263	259	251	227	119	117
Nondurable	368 ^r	366	361	350	300	119	125
Minerals	182 ^r	179	177	171	167	120	111
	144 ^r	141	140	127	137	121	121
FOOD PRODUCTION							
Dairy Products (million pounds)							
Butter, creamery	151.9	s	s	s	167.3	167.0	147.1
Cheese	94.4	s	s	s	101.5	69.6	61.3
Evaporated Milk	275.5	s	s	s	270.0	190.9	162.5
Meats - Total (incl. lard, million pounds)							
Beef and veal	n.a.	s	s	s	1,329.0	1,037.0	792.0
Lamb and mutton	552.6	s	s	s	613.6	469.5	459.7
Pork, including lard	89.5	s	s	s	72.8	56.6	57.6
Lard	n.a.	s	s	s	642.8	510.7	274.5
Poultry and Eggs	165.4	s	s	s	106.7	90.7	35.3
Eggs (millions)	3,863.0	s	s	s	3,547.0	2,857.0	941.0
Poultry (receipts at 5 principal markets, million pounds)	29.7	s	s	s	37.3	25.8	20.9
FEDERAL CIVILIAN EMPLOYMENT (thousands)							
War	3,047 ^r	3,137	3,149	3,010 ^r	2,552	968	874
War Department	2,274	2,368	2,361	2,192	1,677	n.a.	n.a.
Navy Department	1,358	1,451	1,500	1,374	1,030		
Other War Agencies	678	676	637	600	501		
Nonwar	238	241	224	218	146		
	773 ^r	769	788	818 ^r	875	n.a.	n.a.

* Revised Wartime Federal Reserve Index of Production.

** Production Index, September; All Other, August.

† Unadjusted. p Preliminary. n.a. Not available. r Revised. s Seasonal influences invalidate month-to-month comparisons.

REPORTS ON REPORTS

Steel, Nitrogen, Paper, etc.

As a result of downward revisions in munitions schedules, screening of requirements, and increased conservation measures, the pressure on alloy steel, aluminum, nitrogen, and other metals and chemicals has eased. The carbon steel deficit continues, but the big problem in *The Materials Outlook for 1944* (confidential; pp. 13) is the shortage of materials for light industries—textiles, leather, and pulp and paper. Requirements for these products are expanding rapidly, while labor shortages make it difficult to increase supply.

(War Production Board Document 255)

Crisis in Lumber

The lumber industry approaches winter with an inadequate reserve supply of

logs, mill inventories at a dangerous low (25% below last year), and a heavy backlog of unfilled orders, according to *Lumber* (confidential; pp. 12). Government action to increase production has been intensified: the Office of Price Administration has advanced ceiling prices of southern pine and hardwood; operators in southern pine area have been authorized to pay higher sawmill wages. The Army's "Salute to Wood" caravan now is touring the South in a patriotic appeal for increased production. (Department of Commerce, Bureau of Foreign and Domestic Commerce)

[This record is an attempt to select from the many documents coming to the attention of WAR PROGRESS those studies which would be of most interest to readers. The list is by no means comprehensive, and no attempt has been made to evaluate reports for accuracy. Whether reports are available depends on the policy of each individual agency.]

CONFIDENTIAL