

THE TEXTILE INDUSTRY

IMPORTS OF RAW WOOL¹

	Quantity		Value	
	in 1,000 lbs.	in ¥1,000	in 1,000 lbs.	in ¥1,000
1930	115,999	73,919	221,382	204,342
1931	191,374	86,518	261,182	299,500
1932	206,858	88,321	117,895	96,312
1933	242,620	165,818	107,497	74,473
1934	184,379	187,667	Note: (1) Including tops and goat and camel hair.	
1935	247,275	193,092		

IMPORTS OF SHEEP'S WOOL BY ORIGIN

(Compiled by the Ministry of Commerce and Industry)

From	Quantity (Unit: picul)			Value (Unit: ¥1,000)		
	1936	1937	1938	1936	1937	1938
Yen-bloc	5,953	65,498	202,859	908	5,809	12,802
China	2,984	44,000	185,452	382	3,327	11,163
Manchoukuo	2,969	21,458	17,407	527	2,478	1,639
Third countries	1,947,882	816,431	598,829	297,498	88,617	59,788
Australia	737,195	591,136	512,149	118,196	64,882	51,428
New Zealand	296,050	85,671	48,855	42,822	8,272	4,351
Union of South Africa	559,015	39,666	14,372	82,763	4,266	1,599
Argentina	126,548	55,265	8,169	17,713	5,946	686
Great Britain	6,252	3,716	4,179	1,073	677	618
Total including others	1,953,835	881,889	801,688	298,407	94,426	72,590

WOOLLEN YARN AND TEXTILE MANUFACTURING FACILITIES

(At the end of the year)

	1933	1934	1935	1936	1937	1938
Number of woollen textile factories	1,178	1,226	1,421	1,528	1,648	1,650
Number of weaving machines	26,923	27,162	29,421	31,220	30,317	28,311
Number of operatives	41,311	44,347	47,142	50,046	49,890	47,288
Number of worsted spindles ¹	667,390	763,878	873,066	991,140	1,127,802	1,169,120
Number of weaving machines ²	9,871	10,257	10,248	10,261	7,868	7,829
Number of woollen spindles ²	88,403	91,272	97,917	119,048	121,114	134,657

Note: ¹ Only member companies of the Woollen Industrial Association.

PRODUCTION OF WOOLLEN TEXTILES

(Compiled by the Ministry of Commerce and Industry)

Year	Muslin		Flannel		Serge for Japanese Clothes	
	Quantity in meters	Value in yen	Quantity in meters	Value in yen	Quantity in meters	Value in yen
1936	99,935,993	47,077,830	2,511,902	2,985,476	22,922,705	23,297,322
1937	59,877,557	29,779,752	2,655,534	3,903,127	26,946,554	28,183,978
1938	26,303,788	15,868,154	2,721,379	5,116,903	27,798,949	28,380,897
1939	—	357,000	—	—	—	15,580,000
1940	—	305,000	—	—	—	1,967,000

Year	Serge for Foreign Clothes		Woollen Cloth		Blankets (including travelling rugs)	
	Quantity in meters	Value in yen	Quantity in meters	Value in yen	Quantity in meters	Value in yen
1936	63,840,711	180,491,190	15,306,305	43,541,494	2,803,726	10,912,980
1937	66,027,071	169,152,963	18,434,104	58,774,401	2,950,069	12,892,153
1938	56,528,115	162,895,714	21,079,679	78,018,254	2,663,557	13,654,940
1939	—	144,924,000	—	56,945,000	—	18,889,000
1940	—	100,805,000	—	76,301,000	—	5,486,000

HEMP INDUSTRY

Year	Carpets	Rugs	Plush and Velvet	Others	Total
	Value in yen	Value in yen	Value in yen	Value in yen	Value in yen
1936	381,474	230,903	1,416,589	29,521,825	339,857,083
1937	952,367	231,527	2,741,100	21,418,317	328,009,685
1938	670,359	260,958	3,049,401	39,592,129	347,507,709
1939	—	—	—	—	339,797,000
1940	—	—	—	—	266,476,000

Note: This table is revised according to the report of the Ministry of Commerce and Industry, the figures of which differ from those in the "Factory Statistics," because the former includes production by small factories where less than 5 persons are employed;

EXPORTS OF WOOLLEN TEXTILES BY KIND

	1937			1938			1939		
	Quantity in 1,000 sq. yards	Value in ¥1,000	Quantity in 1,000 sq. yards	Value in ¥1,000	Quantity in 1,000 sq. yards	Value in ¥1,000	Quantity in 1,000 sq. yards	Value in ¥1,000	
Muslin	1,573	41,229	1,122	35,367	1,117	40,588	—	—	
Cloth and Serge	1,024	749	749	661	—	—	—	—	
Total including others	—	—	—	—	35,058	28,071	—	—	
Total	28,212	50,082	20,812	46,845	20,034	51,821	—	—	

Hemp Industry

Since the outbreak of the China Affair, the Government has come to attach great importance to the hemp industry, and has placed hemp factories as well as the distribution of raw materials and finished products under military control. Naturally, the supply of hemp products for private consumption has fallen for short of the demand, while the value of hemp fiber for strengthening miscellaneous substitute fibers has been more strongly recognized than ever. It is accustomed to think of hemp as hard and stiff, hardly connecting it with the soft and charming touch of some linens, a way of thinking that has greatly influenced the flax industry of Japan, as proved by the excessive inclination of the military to turn to flax. Hemp is many and various in kinds. In addition to Oasa (commonly called hemp) and ramie, there is jute, from which Hessian cloths and gunny bags are manufactured; Manila hemp, for making fishing nets and other nets; flax, which serves as the principal material for the linen industry; Nanking hemp, imported from China and Maoran hemp, produced in New Zealand. In the early days of the Meiji era, the hemp industry was greatly neglected because of the remarkable advance of the cotton industry, and its progress was slow. Yet, at the time just preceding the outbreak of the China

Affair, Japan was self-sufficient in flax and Oasa hemp, though dependent largely on China and India for the supply of jute. Manila hemp was completely supplied from the districts surrounding Manila. The manufacturers of Japan have found it advisable to produce thick yarns instead of fine ones, and have specialized mostly in this line for manufacturing export hemp materials and fishing-net yarns, besides finding a favorable market with the military and manufacturers of export goods. Itami concerns, especially, have devoted themselves to the production of thicker yarns, and concentrated on export ramie materials and fishing-net yarns.

Hemp Industry Under Wartime Situation Hemp fiber, which was more or less neglected in the past, has, through the stringency of supply of other fibers, now come to the fore, especially in military quarters. Because of the suspension of imports of ramie materials from China and the supply of jute and other hemp materials from other parts of the world since the outbreak of the European War, supplies have become very low, but domestic production is now being pushed to overcome any deficiency, and little worry is being felt by the industrialists concerned as there is also an abundant supply of hemp plants along the banks of the

Yulu and other rivers and lakes in China, though at present, the available raw materials in China and Manchoukuo are under the control of the military, and are almost exclusively supplied to the Imperial Hemp Company and Nichiman (Japan-Manchoukuo) Flax Company. It is considered, however, that after the restoration of peace and order in those regions, unlimited supplies can be imported. The production of hemp is shown by the following tables:

DOMESTIC PRODUCTION OF HEMP

(In 1,000 Kan)

Years	Japan Proper	Chosen	Taiwan	Total Production
1926	11,310	6,065	1,322	18,696
1927	4,891	5,867	1,282	12,040
1928	6,231	5,710	1,489	13,430
1929	7,114	5,544	1,314	13,973
1930	6,733	5,353	1,352	13,437

Years	Japan Proper	Chosen	Taiwan	Total Production
1931	6,859	5,444	1,283	13,587
1932	5,630	5,492	1,455	12,577
1933	8,706	5,484	1,635	15,825
1934	10,327	5,026	2,795	18,148
1935	9,597	5,291	3,649	18,537
1936	9,846	4,966	2,742	17,554
1937	9,840	5,666	2,840	17,409
1938	16,985	5,460	3,953	26,398

PRODUCTION OF HEMP BY KINDS IN 1938

(In 1,000 Kan)

	Japan Proper	Chosen	Taiwan	Total
Flax	13,680	1,084	—	14,764
Hemp	2,383	4,255	—	6,638
Jute	333	1	3,746	4,080
Ramie	589	89	207	885
Blue hemp	—	31	—	31
Total	16,985	5,460	3,953	26,398

SUPPLY AND DEMAND OF HEMP IN JAPAN 1938

(In 1,000 kin)

	Production	Imports	Imports from Colonies	Exports to Colonies	Domestic Consumption
Hemp	7,439.6	4,203.7	—	—	11,643.3
Flax	10,260.1	4,284.0	812.9	—	15,357.0
Ramie	3,681.2	3,528.9	187.6	—	7,397.7
Jute	1,145.5	34,879.8	1,701.4	—	37,736.7
Manila hemp	—	62,235.0	—	1,524.4	60,710.6
Sisal hemp	—	—	679.3	—	679.3
Total	22,526.4	109,131.4	3,381.2	1,524.4	133,514.6

IMPORTS OF HEMP BY ORIGIN

(Quantity in 100 kin; Value in ¥1,000)

Origin	1937		1938		1939	
	Quantity	Value	Quantity	Value	Quantity	Value
Manchoukuo	60,945	1,273	170,171	5,587	187,880 (13.5%)	11,363 (29.7%)
China	215,738	5,127	117,648	3,116	266,255 (18.7%)	9,139 (23.8%)
British India	449,591	8,344	202,476	3,769	252,307 (17.8%)	5,766 (15.1%)
Dutch Indies	47,575	1,279	14,702	399	12,784 (0.9%)	264 (0.6%)
Philippines	967,854	23,224	647,889	11,889	621,033 (43.8%)	10,550 (27.6%)
England	296	46	6,453	973	227 (—)	28 (—)
Others	124,654	1,701	102,458	1,573	75,460 (5.3%)	1,156 (3.1%)
Total	1,866,653	40,995	1,261,597	27,306	1,415,946 (100%)	38,266 (100%)

Because of limited supply of other fibers, domestic hemp manufacturers catering to private consumption have come to need spinning machines suitable for spinning fibers similar in nature to hemp into soft and good-looking

yarns, and the invention of a method for "cottonizing" hemp mechanically rather than chemically so that it may become sufficiently soft to be worked on the ordinary cotton spinning machines has become a matter of urgent

need.

Government Hemp Measures The Ministry of Agriculture and Forestry in 1938 drafted a plan for the increased production of hemp, and for this purpose unified the standards of various hemp fibers in an endeavor to control their sales, and has exercised control over the distribution of imported hemp raw materials. Because Japan is well nigh self-sufficient in hemp and flax, the production increase plan has been applied mostly to the production of ramie, the present plan calling for an increase in the ramie-planted fields by 2,000 chobu (1 chobu—about 1 hectare) annually or by a total of 10,000 chobu by 1942, thereby increasing the total ramie-planted area in Japan to 14,000 chobu, inclusive of existing ramie fields, and making the country self-supplying as far as the domestic consumption of ramie, amounting to 28,000,000 kin (1 kin=0.6 kg.), goes. To carry out this scheme, the Agriculture Ministry has reserved an annual appropriation of about ¥400,000, the different measures adopted by it being summarized as follows:

1. A production allotment to be given to prefectures in which an increase of ramie production is certain and in which future production will be large.
2. Encouragement of the mass cultivation of ramie in prefectures in which there is plenty of space for ramie plant-

ing and the soil is fit for ramie.

3. Cultivating bodies shall be ramie planting associations or agricultural executive associations classified by villages.

4. The area allotted to members of the associations for cultivation shall be more than 5 se (1 se—about 1 are) per family and that of one organization shall be more than 1 chobu (about 1 hectare).

Thus, in selecting districts for the cultivation of ramie, the authorities concerned will exclude as far as possible the provinces in which ramie cultivation is less profitable than the cultivation of other agricultural products, even if they are naturally fit for ramie planting. In this connection, it is noted that Kyushu and West Japan are fit for planting ramie while the Kwanto and Tohoku districts are ideal for hemp. Hokkaido is fit for the cultivation of flax. Flaxen fibers thus produced are allotted as raw materials for the manufacture of munition materials, for use by aircraft, as materials for manufacturing fishing nets, and to the Aviation Bureau of the Communications Ministry. Free transactions by producers are being strictly restricted by the Government. The distribution of imported hemp items is generally controlled and managed by the trade associations or federations of trade associations, the control routine differing according to the different kinds of hemp materials imported.

DOMESTIC PRODUCTION OF HEMP TISSUES 1937—1938

	1937		1938	
	Quantity	Value	Quantity	Value
Broadcloths:				
Jute tissues				
Sailcloths	9,510	1,998	8,934	2,917
Others	—	3,834	—	6,094
Total	—	5,832	—	9,011
Others				
Sailcloths	2,403	2,804	3,442	4,356
Mosquito-net materials	3,154	1,120	3,280	1,867
Others	—	8,812	—	11,561
Total	—	12,736	—	17,784
Broadcloths total	—	18,567	—	26,795
Narrow-cloths:				
Grey and bleached hemp tissues	651	1,478	431	1,472
Striped or patterned hemp cloths	195	1,440	213	1,882
Mosquito-net materials	2,605	1,516	1,986	2,418
Others	—	682	—	444
Total	—	5,516	—	6,217

	1937		1938	
	Quantity	Value	Quantity	Value
Special items:				
Belts and hoses	1,794	2,193	1,819	2,448
Others	—	1,192	—	800
Total	—	3,295	—	3,248
GRAND TOTAL	—	26,978	—	36,259

(Note: Quantity in 1,000 meters, narrow-cloths alone given in 1,000 tan of 10 to 12 yards; value in ¥1,000).

EXPORTS OF HEMP ITEMS 1938-1939

	1938		1939	
	Quantity	Value	Quantity	Value
Hemp tissues—				
Canvases (a)	94	103	345	457
Others (a)	2,953	1,607	8,938	6,353
Total (a)	3,047	1,710	9,283	6,810
Hemp bags (b)	6	1,660	24	14,850
Flax, hemp and other like materials (c)	636	107	225	38
Flax yarns (c)	—	—	60	6
Ramie yarns (c)	204	41	4	2
Hemp threads and cords (c)	4,604	674	8,258	1,595
Hemp ropes (c)	25,683	1,129	44,390	2,232
Total exports		5,321		25,533

(Note: (a) given in 1,000 sq. yds.; (b) given in 1,000 pieces; (c) given in 100 kin; value in ¥1,000).

IMPORTS OF HEMP ITEMS 1938-1939

	1938		1939	
	Quantity	Value	Quantity	Value
Hemp tissues—				
Jute cloths (a)	890	233	346	60
Others (a)	57	81	10	3
Total (a)	946	315	355	63
Gunny bags	31,235	751	—	398
Flax	43,000	2,441	66,046	2,755
Ramie	25,984	931	204,484	7,909
Hemp	78,600	3,751	141,840	8,792
Jute	321,380	6,387	287,162	7,028
Manilla hemp	622,350	11,398	623,842	10,433
Others	170,283	2,397	92,572	1,350
Total imports		28,371		38,728

(Note: (a) given in 1,000 sq. yards; others given in 100 kin; value in ¥1,000).

HEMP INDUSTRIAL PLANTS, MACHINES AND OPERATIVES

1928-1938

Years	Plants	Machines	Operatives	Year	Plants	Machines	Operatives
1929	15,316	21,871	21,940	1934	12,062	18,413	18,679
1930	14,222	20,704	21,261	1935	10,926	17,854	19,313
1931	14,375	20,414	20,519	1936	10,880	17,315	18,371
1932	13,821	19,192	19,593	1937	9,352	17,055	19,091
1933	12,775	18,139	18,675	1938	8,229	17,382	18,006

(a) WHOLESALE PRICE INDICES OF HEMP YARNS AND TISSUES
(1933 as 100)

	Hemp Hemp Hemp Fibrous				Hemp Hemp Hemp Fibrous				
	Yarns	Tis-	Raw	Raw	Yarns	Tis-	Raw	Raw	
		sues	Materials	Materials		sues	Materials	Materials	
1936 average	144	95	105	102	July	121	166	149	124
1937 average	170	114	109	116	August	121	166	149	121
1938 average	132	156	144	104	September	135	166	149	142
1939 average	132	166	149	130	October	158	166	149	151
1939:					November	164	166	149	155
January	120	166	149	107	December	158	166	149	175
February	121	166	149	110	1940:				
March	121	166	149	113	January	155	166	149	179
April	121	166	149	115	February	151	166	149	162
May	121	166	149	124					
June	121	166	149	123					

(a) Survey by the Bank of Japan.

PRODUCTION OF HEMP TISSUES

(Compiled by the Ministry of Commerce and Industry)

Year	No. of Mills	No. of Looms	No. of Operatives	Broad Weave	Narrow Weave	Others	Total
1930	14,222	20,708	21,261	6,131	5,500	2,991	14,623
1931	14,375	20,414	20,519	6,118	5,363	1,954	13,436
1932	13,821	19,192	19,593	8,002	6,279	1,299	15,580
1933	12,775	18,139	18,679	7,550	5,728	2,197	15,477
1934	12,062	18,413	18,675	9,530	7,116	1,868	18,515
1935	10,926	17,854	19,313	10,686	7,052	2,481	20,220
1936	10,880	17,315	18,371	12,533	5,115	2,203	19,851
1937	9,352	17,055	19,091	18,567	5,116	3,295	26,978
1938	8,229	17,382	18,006	26,795	6,217	3,247	36,259

Hosiery

In 1938, hosieries produced underwears, stockings, gloves, etc. to the amount of ¥118,891,464. The production

of underwears reached 7,242,068 dozens valued at ¥48,782,440; stockings 13,533,674 dozens valued at ¥29,395,601; gloves 6,392,539 dozens valued at ¥14,467,117.

VALUE OF PRODUCTION BY HOSIERIES

(Compiled by the Ministry of Commerce and Industry)

Year	No. of Mills	No. of Operatives	Value of Products
1933	5,243	38,241	73,476
1934	5,853	41,658	85,632
1935	6,198	45,605	84,931
1936	6,250	46,947	91,551
1937	6,776	51,332	115,501
1938	6,437	49,039	118,891

Dyeing and Bleaching

In 1938, bleaching houses earned ¥46,916,557. In the same year dyeing houses

earned ¥168,921,654, consisting of ¥78,976,280 for dyeing cloth, ¥77,000,063 for printing and ¥12,945,311 for dyeing miscellaneous articles.

EARNINGS OF DYEING AND BLEACHING HOUSES

(Compiled by the Ministry of Commerce and Industry)

Year	No. of Bleaching Houses	No. of Operatives	Earnings (In ¥1,000)	No. of Dyeing Houses	No. of Operatives	Earnings (In ¥1,000)
	(At the end of year)			(At the end of year)		
1933	521	6,350	19,336	11,659	57,674	105,193
1934	578	8,031	17,099	11,613	61,776	120,795
1935	632	8,114	19,822	11,570	65,986	134,107
1936	619	9,432	22,795	11,784	74,580	168,676
1937	571	9,496	24,545	11,778	75,757	168,934
1938	579	7,360	46,916	10,774	68,126	168,921

BUSINESS RESULTS OF THE FIBER INDUSTRY IN 1939 AND 1940

(Compiled by the Industrial Bank of Japan)

Kind	No. of Companies Invested	Rate of Profit against Paid-up Capital			Rate of Dividend			Rate of Reserves		
		Second Half	First Half	Second Half	Second Half	First Half	Second Half	Second Half	First Half	Second Half
		1939	1940	1940	1939	1940	1940	1939	1940	1940
Cotton spinning	73	18.9	20.4	23.2	12.5	12.5	11.9	31	37	45
Raw silk	4	30.5	23.5	16.9	8.3	9.5	9.5	71	56	41
Woollen textiles	26	15.4	26.0	16.3	9.1	9.5	9.4	34	36	36
Artificial silk and staple fiber	22	13.3	13.4	12.0	10.3	10.4	9.1	19	19	20
Hemp	10	24.9	26.5	30.0	9.9	10.0	9.7	53	59	63

CHAPTER XIX

MACHINERY AND ENGINEERING

NIPPON TYPEWRITER CO., LTD.



Head Office



ESTABLISHED: 1917

CAPITAL:
Yen 15,000,000 Paid-up
MANUFACTURERS
and **EXPORTERS**

HEAD OFFICE:
Takaracho, Kyobashi-ku, Tokyo,
Japan

P.O. Box No. 4, Kyobashi, Tokyo
Cable Address:
"HOBUNTYPE" TOKYO

BRANCHES: Osaka, Nagoya, Fukuoka, Keijo, Dairen, Hsinking, Peking, Shanghai, Bangkok.

AGENTS: Hanoi, Soerabaja, Mexico, Colombia, Chile, Brazil, Argentina.

CODES USED: Bentleys, Acme, A.B.C. 5th & 6th, Oriental 3-Letter Code, Private.

BANKS: Yokohama Specie Bank, Mitsui Bank, Mitsubishi Bank, Yasuda Bank, Sumitomo Bank, Tokyo.

PRINCIPAL LINES OF BUSINESS:

Typewriters & Accessories, Stationeries, Office Appliances & Machines; Surveying Instruments, Printing Machinery, Weaving Machinery; Machine Tools, Mining Machinery; Papers; 16 mm. Movie Projectors; Projection Microscope; Photographic Camera; Binoculars, Fish Alluring Lamp; "Duolife" House-lamp; Oilserb (Powder Cleaner for Oil, Grease & Fat) Gold & Silver Threads & Moles.

CAPITAL: ¥358,000,000

Cable Address:
"HITACHI"
Tokyo
All Codes
Used

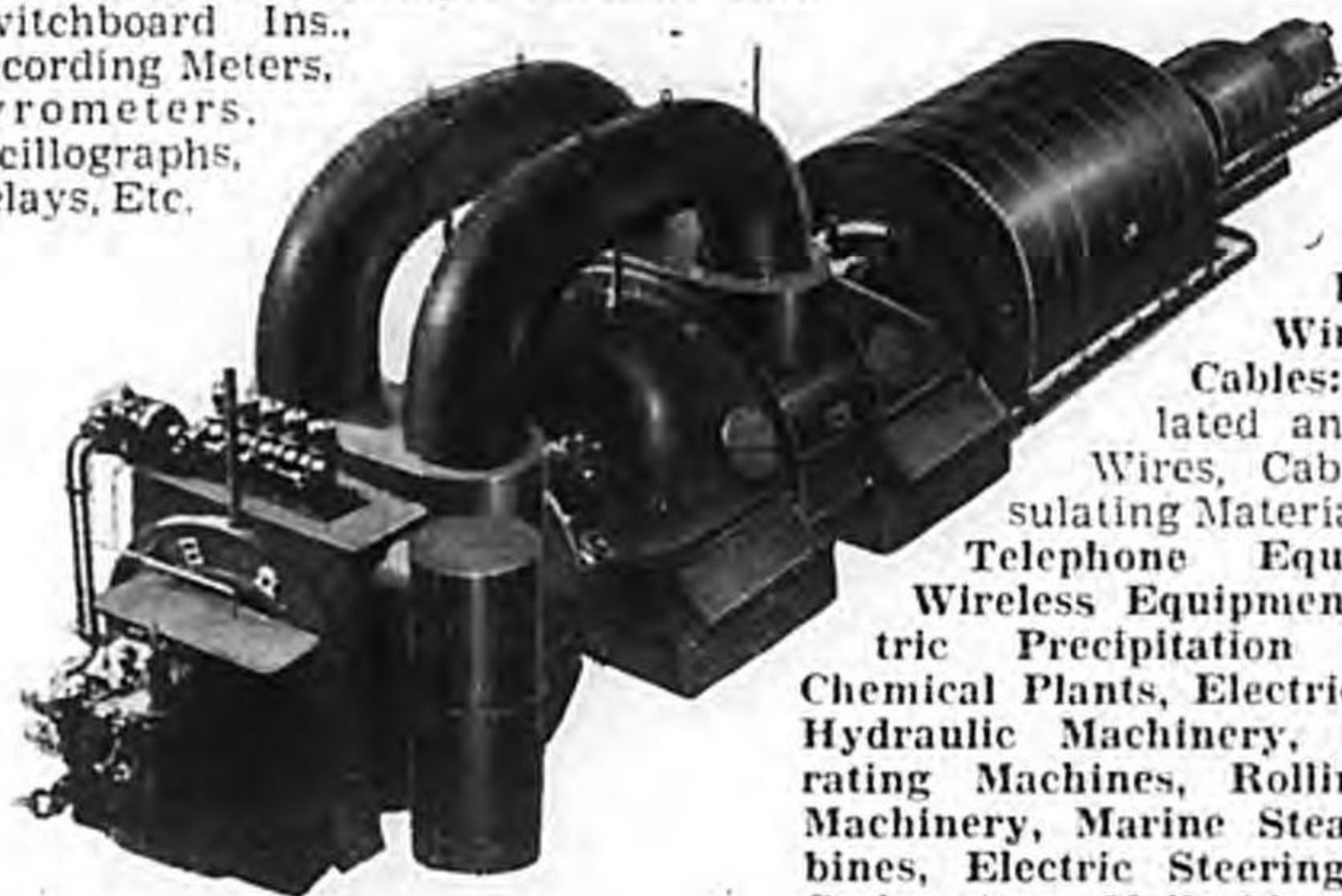
Hitachi, Ltd.

Tokyo Japan

Reference Banks:
The Yokohama Specie
Bank, Ltd., Tokyo
The National City
Bank of New York,
Tokyo

PRINCIPAL MANUFACTURES

Equipment for Hydro and Steam Electric Power Plants and Substations: Waterwheels, Generators, Turbo-Alternator Sets, Boilers, Transformers, Switching Equipment, Motors, Etc. **Mining Machinery:** Winding Machines, Pumps, Compressors, Blowers, Fans, Mine Locomotives, Arc Welders, Motors, Coal Cutters, Drill Sharpeners, Etc. **Transporting Machinery:** Cranes, Elevators, Hoists, Conveyors, Etc. **Railway Equipment:** Steam and Electric Locomotives, Gasoline or Diesel Engine Cars, Rolling Stocks, Railway Supplies, Etc. **Electric Measuring Instruments and Relays:** Portable Ins., Switchboard Ins., Recording Meters, Pyrometers, Oscillographs, Relays, Etc.



37,500 kVA Three-phase
Turbo-Generator

Electric Wires and Cables: Insulated and Bare Wires, Cables, Insulating Materials, Etc. **Telephone Equipment, Wireless Equipment, Electric Precipitation Plants, Chemical Plants, Electric Tools, Hydraulic Machinery, Refrigerating Machines, Rolling Mill Machinery, Marine Steam Turbines, Electric Steering Gears, Carburettors, Malleable and Steel Castings, Special and Cutlery Steels, Etc.**

**Manufacturers and Exporters of All Kinds of Equipment for
Electrical and Mechanical Industries**



NIPPON SEITETSU KABUSHIKI KAISHA

Yusen Building, Marunouchi, TOKYO

PRODUCTS:

Pig Iron, Billets, Steel Bars, Structural Steel, Rails, Wire Rods, Sheet Piles, Steel Plates and Sheets, Strips and Tin Plate, Forgings, Slag-Cement, Slag-Bricks, Slag-Ballast, Slag-Wool, Ammonium Sulphate, Benzol, Creosote, Coal-Tar, Pitch, Etc.

JAPAN IRON & STEEL MANUFACTURING COMPANY LIMITED

HEAD OFFICE:

Yusen Building, Marunouchi, Kojimachi-ku, TOKYO

MILLS:

Yawata Iron & Steel Works, Yawata-shi, Fukuoka Pref.
Wanishi Iron & Steel Works, Muroran-shi, Hokkaido
Kamaishi Iron & Steel Works, Kamaishi-shi, Iwate Pref.
Fuji Steel Works, Kawasaki-shi, Kanagawa Pref.
Osaka Steel Works, Taisyō-ku, Osaka-shi
Kenjiho Iron & Steel Works, Kenjiho, Kokaido, Korea
Hirohata Iron & Steel Works,
Hirohata-machi, Shikama-gun, Hyogo Pref.
Seishin Iron & Steel Works,
Nishimatsuzato-machi, Seishin-fu, Kankyohokudo, Korea

"Nachi"



MAIN PRODUCTS:
Small tools, Gauges, Jigs
& Fixtures, Machine tools,
Ball & Roller Bearing, Steel
Ball, Special alloy steel.

CAPITAL:

¥51,600,000

President: KOKI IMURA

FUJIKOSHI KOZAI KOGYO CO., LTD.

Head Office & Works: No. 20, Ishigane, Toyama

Branches & Agencies:

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MACHINERY AND ENGINEERING

Years	(a) Total Number of Operatives in all Industries (Unit: 1,000)	(b) Number of Operatives in Machinery Industry	Ratio of (b) against (a) (Percentage)
1935	2,369	367	15.5
1936	2,593	457	17.6
1937	2,937	602	20.5
1938	3,201	847	26.4
1939	3,766	1,126	29.9

INCREASE IN NUMBER OF MACHINERY FACTORIES

1929-1938

Years	(a) Total Number of Industrial Factories	(b) Number of Machinery Factories	Ratio of (b) against (a) (Percentage)
1930	62,234	5,604	9.0
1931	64,436	5,850	9.1
1932	67,318	6,738	10.0
1933	71,940	7,850	10.9
1934	80,311	9,181	11.4
1935	85,174	10,354	12.2
1936	90,602	11,766	13.0
1937	106,005	14,636	13.8
1938	112,329	17,576	15.6
1939	137,422	23,067	16.7

The recent expansion of investments in joint-stock companies, inclusive of limited partnerships, and the increase in the number of machinery companies is remarkable. At the end of 1939, the total amount of paid-up capital of the machinery companies aggregated ¥4,000,000,000. In the first half of 1939,

the number of machinery concerns was more than doubled and the total amount of paid-up capital increased four and a half times, compared with the second half of 1938. In that period, some 70 machinery firms expanded their capital. Production in the machinery industry also jumped in 1939, as shown below:

EXPANSION OF PRODUCTION IN MACHINERY INDUSTRY

1929-1938

(In millions of yen)

Years	(a) Total Industrial Production	(b) Production in Machinery Industry	Ratio of (b) against (a) (Percentage)
1930	5,963	695	11.7
1931	5,175	498	9.6
1932	5,982	599	10.0
1933	7,871	888	11.3
1934	9,390	1,159	12.3
1935	10,837	1,463	13.5
1936	12,258	2,716	14.0
1937	16,356	2,557	15.6
1938	19,487	3,801	19.5
1939	24,360	5,421	22.2

RECENT DEVELOPMENT

NUMBER OF COMPANIES AND AMOUNT OF CAPITAL IN MACHINERY INDUSTRY

	General Machinery Industry	Elec- tric Machinery	En- gines	Ship- building	Rolling Stock	Machine Tools	Metal Items	Total (including others)
No. of companies at end of 1939	1,468	595	94	88	198	616	1,564	4,683
Combined authorized capital at end of 1939 (a)	1,003	644	99	386	480	413	1,723	4,801
Combined paid-up capital at end of 1939 (a)	764	502	68	309	480	413	1,723	4,801
New companies established:								
2nd half, 1938	171	40	6	4	6	66	151	459
1st half, 1939	372	86	16	5	18	115	334	958
Increase	201	46	10	1	12	49	183	495
Authorized capital of newly-established companies:								
2nd half, '38 (b)	50,021	5,555	550	1,515	2,245	17,124	36,841	116,788
1st half, '39 (b)	123,951	14,676	1,985	792	32,518	98,906	303,954	381,591
Increase (b)	73,930	9,121	1,435	*723	30,273	81,782	267,103	464,803
Paid-up capital of newly-established companies:								
2nd half, '38 (b)	33,550	4,705	412	1,515	1,262	9,882	24,259	77,735
1st half, '39 (b)	87,765	10,511	1,755	433	19,806	61,445	167,836	351,937
Increase (b)	54,215	5,806	1,343	*1,082	18,544	51,563	143,577	274,202
Capital expansion:								
Companies, 2nd half, 1938	69	19	4	3	12	15	93	216
Companies, 1st half, 1939	88	38	7	4	7	38	104	286
Increase	19	19	3	1	*5	23	11	70
Increase in capital authorized:								
2nd half, '38 (b)	72,692	14,433	4,695	3,607	26,375	19,228	86,099	231,880
1st half, '39 (b)	65,040	112,333	3,645	2,400	25,200	22,236	75,088	305,942
Increase (b)	*7,652	97,900	*1,050	*1,207	*1,175	3,008	*11,011	74,062
Increased capital paid-up:								
2nd half, '38 (b)	33,362	5,959	1,645	3,357	7,875	5,433	34,496	1,187
1st half, '39 (b)	33,858	34,633	3,645	1,325	7,075	9,732	35,855	126,123
Increase (b)	496	28,674	2,000	*2,032	*800	4,299	1,359	32,807
Shareholders' payments:								
Companies, 2nd half, 1938	65	35	10	8	12	14	72	220
Companies, 1st half, 1939	113	33	9	4	12	42	117	333
Increase	48	*2	*1	*4	—	28	45	113
Shareholders' payments: Amount, 2nd half, '38 (b)	19,445	10,801	3,700	4,557	14,432	16,988	56,294	136,265

Amount, 1st half, '39	General Machinery Industry	Elec- tric Ma- chinery	En- gines	Ship- building	Rolling Stock	Machine Tools	Metal Items	Total (including others)
	(b) 47,349	11,994	6,815	17,072	18,550	9,233	78,999	190,148
Increase	(b) 27,904	*7,807	3,055	12,515	4,118	*7,755	22,705	53,883
(a)	In millions of yen. (Note: Survey by the Hypothec Bank of Japan).							
(b)	In ¥1,000.							

BUSINESS RESULTS OF MAJOR MACHINERY MANUFACTURING COMPANIES

(Compiled by the Industrial Bank of Japan)

	Number of Companies Investigated	Paid-up Capital (¥1,000)	Rate of Dividend (%)	Rate of Reserves (%)	Rate of Profit against Paid-up Capital (%)
1937:					
First half	105	378,328	8.8	44	17.3
Second half	135	483,253	9.3	41	17.7
1938:					
First half	157	601,255	8.6	45	17.5
Second half	174	707,290	8.7	45	18.2
1939:					
First half	191	858,274	8.5	48	18.7
Second half	191	1,032,252	8.6	51	19.8
1940:					
First half	191	1,195,146	8.2	50	19.0
Second half	205	1,400,510	8.4	49	18.7

PRODUCTION OF ENGINES

(Value in yen)

Year	Steam Engines		Steam Turbines		Gas Engines		Light Oil Engines	
	No. Produced	Value	No. Produced	Value	No. Produced	Value	No. Produced	Value
1930	74	298,341	42	2,220,460	575	340,416	1,337	11,852,363
1931	97	80,769	17	1,458,889	10	8,800	778	5,008,217
1932	77	150,006	86	1,022,760	103	76,472	2,371	20,587,362
1933	162	580,519	51	7,269,146	142	116,780	5,546	32,360,597
1934	105	617,215	102	6,893,407	54	15,948	4,866	19,784,471
1935	144	1,308,033	187	10,551,116	14	43,260	8,439	21,092,789
1936	129	2,405,409	106	8,352,713	4	7,850	8,354	30,948,045
1937	130	486,027	229	13,552,628	168	235,110	7,456	54,149,245
1938	121	1,081,443	199	18,209,794	484	1,125,108	5,355	93,737,398

Year	Internal Combustion Engines		Internal Combustion Engines		Total
	Oil Engines	Value	Heavy Oil Engines	Value	
1930	104,854	9,671,130	2,274	6,759,923	29,723,832
1931	15,295	5,228,870	2,002	8,248,660	18,494,447
1932	16,558	4,420,307	1,783	5,790,541	30,874,682
1933	17,229	4,049,818	3,961	11,618,068	46,605,230
1934	53,889	6,856,672	4,151	15,267,978	41,925,069
1935	35,603	8,832,063	4,310	17,680,899	47,649,011
1936	37,291	8,485,516	12,510	20,987,381	60,428,792
1937	40,263	9,417,941	12,762	27,602,967	91,405,263
1938	44,347	14,450,145	10,274	33,438,388	143,751,039

Note: Figures for 1939 are not yet published.

PRODUCTION OF ENGINES (Continued)

(Value in yen)

Year	Water Wheels		Pelton Water Wheels		Total	Production of Fittings Value	Grand Total Value
	No. Produced	Value	No. Produced	Value			
1930	115	1,890,568	17	35,811	1,926,376	2,207,825	36,377,837
1931	111	765,540	7	81,521	847,063	1,333,930	22,215,098
1932	173	575,847	1	1,492	577,339	1,493,765	34,118,552
1933	91	183,076	57	318,189	501,265	2,867,389	59,365,582
1934	164	1,319,476	21	133,348	1,452,824	3,483,848	54,372,263
1935	124	1,541,528	5	298,999	1,840,527	7,558,079	68,906,766
1936	202	4,419,243	26	425,778	4,845,021	10,433,286	86,465,221
1937	163	6,223,151	10	325,668	6,548,819	15,440,838	127,433,575
1938	185	8,035,457	7	156,581	8,192,038	20,105,692	191,430,006

PRODUCTION OF BOILERS

(Value in yen)

Year	Water-Tube Style		Cast Iron		Others		Fittings and Accessories value	Total value	Machinery for Producing Gas value
	No. Produced	Value	No. Produced	Value	No. Produced	Value			
1930	143	2,573,598	374	249,798	844	1,097,745	1,283,860	5,169,731	952,585
1931	86	2,388,832	89	50,330	1,180	1,197,505	2,724,523	6,369,190	727,929
1932	86	1,185,444	264	178,000	1,257	2,384,306	701,659	4,449,409	586,440
1933	120	2,071,541	281	217,976	2,020	5,617,207	3,647,849	11,554,573	1,210,160
1934	155	8,327,410	14	386,254	1,531	5,965,028	6,413,992	21,092,684	1,092,612
1935	255	19,863,758	382	437,146	1,743	3,942,038	10,226,313	34,469,255	1,594,975
1936	309	16,084,129	426	587,000	1,794	6,939,190	8,122,970	31,733,289	1,805,807
1937	826	19,243,758	5	458,630	2,376	8,279,781	11,730,879	39,713,048	3,479,325
1938	687	21,611,515	8	6,300	4,061	17,373,476	16,159,856	55,151,147	8,414,440

PRODUCTION OF PUMPS, COMPRESSORS AND FANS

(Value in yen)

Year	Pumps		Hydraulic Compressors		Gas Compressors		Blowing Machines (Fans)	
	No. Produced	Value	No. Produced	Value	No. Produced	Value	No. Produced	Value
1930	515,642	8,002,940	1,084	452,580	9,239	3,152,991	1,475	599,142
1931	398,632	6,837,801	686	358,938	2,230	1,627,198	13,266	748,891
1932	290,480	6,510,822	1,102	720,903	2,199	1,123,213	28,433	755,241
1933	290,477	9,669,019	933	810,502	1,989	1,721,220	4,152	1,143,718
1934	427,999	13,027,236	1,152	1,175,656	3,323	3,993,231	5,425	2,410,354
1935	322,667	15,153,628	1,166	1,346,068	5,026	5,350,943	12,369	3,914,662
1936	461,113	19,680,578	1,479	1,828,575	3,664	6,278,294	11,231	3,634,164
1937	358,232	27,896,976	1,669	3,574,041	9,900	11,692,697	15,112	6,887,000
1938	353,610	41,269,114	979	5,247,250	16,210	21,795,491	25,092	13,535,463

PRODUCTION OF OPTICAL INSTRUMENTS

(Value in yen)

Year	Lenses, including Prisms		Microscopes	Telescopes	Field-glasses	Glasses
	No. Produced	Value				
1931	433,338	72,076	20,885	98,741	230,338	
1932	572,961	54,750	182,302	227,325	360,114	
1933	787,249	261,727	1,433,169	3,304,068	126,050	
1934	954,515	328,834	2,160,119	5,539,078	62,400	
1935	1,276,617	391,474	5,488,746	2,235,208	90,483	
1936	1,536,575	553,498	4,319,450	2,109,484	52,644	
1937	1,675,576	428,472	89,136	4,859,539	71,099	
1938	1,813,526	549,335	624,839	2,727,849	514,575	

PRODUCTION OF MEASURING AND WEIGHING INSTRUMENTS

(Value in yen)

Year	Rules	Measures	Scales	Gas Meters	Water Meters	Accessories & Fittings	Total
1930	794,776	298,269	3,033,458	2,998,262	1,379,397	411,724	8,915,886
1931	581,717	248,705	2,443,134	1,998,534	1,345,382	264,173	6,881,645
1932	705,510	175,568	2,228,220	1,870,250	1,485,165	466,348	6,931,071
1933	869,288	298,100	3,692,690	2,042,099	1,391,487	467,937	8,761,607
1934	1,019,479	228,432	3,848,631	2,064,405	1,141,105	508,070	8,810,128
1935	1,224,720	580,202	4,200,844	2,236,139	1,660,923	642,901	10,545,729
1936	1,318,589	709,227	4,597,311	3,938,352	1,660,144	896,845	13,120,468
1937	1,365,288	900,049	5,456,722	4,865,278	1,941,244	1,161,861	15,690,442
1938	2,188,261	910,399	5,935,019	3,042,025	2,169,071	1,653,465	15,898,240

PRODUCTION OF VARIOUS METERS

(Value in yen)

Year	Thermometers		Clinical Thermometers		Electricity Meters		Others	Total
	No. Produced	Value	No. Produced	Value	No. Produced	Value		
1930	745,307	381,415	1,046,500	841,766	209,287	2,772,177	2,984,421	6,979,779
1931	676,743	310,924	1,237,192	777,377	213,011	2,657,049	3,066,257	6,811,607
1932	511,786	273,356	1,388,889	883,335	395,298	3,997,290	2,622,110	7,776,091
1933	750,742	431,194	1,518,544	839,151	439,268	7,312,489	4,696,288	13,279,122
1934	987,023	393,973	1,884,875	1,095,826	539,273	7,247,533	7,938,757	16,576,086
1935	1,024,870	388,441	1,886,433	1,088,657	517,888	8,901,676	12,851,744	23,230,418
1936	1,064,192	341,085	2,069,867	1,137,237	719,498	8,175,176	19,637,206	29,290,707
1937	1,326,141	270,932	2,338,080	1,449,331	928,835	12,582,718	24,113,695	38,416,676
1938	563,167	382,131	2,649,098	1,650,278	812,433	17,259,007	32,992,478	52,283,894

PRODUCTION OF CLOCKS AND WATCHES

(Value in yen)

Year	Electric Clocks		Stand Clocks		Clocks
	No. Produced	Value	No. Produced	Value	
1930	11,699	579,919	1,155,988	2,055,593	474,565
1931	11,250	366,148	993,287	1,350,822	362,011
1932	6,151	216,019	857,594	1,552,117	436,513
1933	7,654	240,388	1,270,467	2,047,417	514,626
1934	51,373	574,365	1,728,567	2,637,488	876,747
1935	78,675	892,791	1,930,234	3,076,711	543,069
1936	92,352	978,035	2,155,829	3,378,601	1,057,501
1937	411,493	2,720,009	2,244,210	4,176,048	892,221
1938	170,151	2,064,868	1,457,599	3,894,882	609,639

Year	Clocks		Watches		Fittings	Total
	Value	No. Produced	Value	No. Produced		
1930	1,911,182	181,233	1,013,042	5,846,179	11,405,915	
1931	1,390,718	169,358	657,528	2,310,248	6,075,464	
1932	1,629,130	160,288	681,156	2,590,187	6,868,669	
1933	2,122,065	153,247	794,183	3,160,690	8,364,743	
1934	2,748,623	158,520	936,942	4,684,064	11,581,482	
1935	3,000,328	165,962	952,875	5,136,344	13,059,049	
1936	3,279,386	235,666	1,435,043	5,755,982	14,827,047	
1937	3,950,736	1,131,901	6,576,064	3,341,156	20,764,013	
1938	3,738,873	1,447,529	7,654,735	4,082,474	21,435,832	

PRODUCTION OF CRANES, ELEVATORS, etc.

(Value in yen)

Year	Cranes		Hoists, Conveyors, etc.		Elevators	
	No. Produced	Value	Value	No. Produced	Value	
1930	3,138	5,834,200	3,254,024	815	1,800,499	
1931	396	1,828,835	2,174,962	519	1,502,950	
1932	637	2,303,674	2,269,622	691	1,509,437	
1933	1,278	5,402,508	4,607,460	614	1,238,638	
1934	1,078	8,306,927	7,716,384	904	2,889,608	
1935	1,339	12,961,504	10,134,238	640	2,118,757	
1936	1,509	14,642,286	10,961,871	1,232	3,845,689	
1937	2,943	18,846,957	21,146,541	1,724	4,210,432	
1938	6,828	33,668,566	31,866,971	2,148	8,071,068	

PRODUCTION OF VARIOUS MACHINERY FOR INDUSTRIAL PURPOSES

(Value in yen)

Year	Agricultural Machines	For Building and Civil Engineering Work	Instruments for Farming, etc.	For Mining	For Spinning and Textile Industries	For Ceramic and Cement Industry
1931	2,914,996	981,111	2,459,796	2,047,128	22,756,086	709,668
1932	4,297,720	898,830	3,187,430	3,060,091	27,478,898	1,044,278
1933	4,756,029	1,559,468	5,023,786	6,190,028	44,151,201	4,351,629
1934	5,720,304	1,351,098	5,178,672	9,672,126	64,653,507	5,258,333
1935	8,599,530	1,639,373	5,814,586	14,320,438	86,016,362	3,869,844
1936	11,021,222	2,793,359	5,171,958	13,405,110	99,338,746	5,216,179
1937	14,157,224	5,320,806	8,448,974	31,771,077	129,100,591	4,748,478
1938	19,584,886	8,486,273	8,678,116	53,435,763	110,726,371	3,668,802

Year	Printing	For Saw-mills	For Paper Manufacturing	For Chemical Industries	For Various Manufacturing	For Food Printing Type	Miscellaneous
1931	5,320,524	1,419,285	695,861	2,638,421	3,443,043	2,462,696	3,696,522
1932	6,615,661	1,354,372	509,207	4,869,055	3,563,442	1,855,639	5,271,977
1933	6,992,743	1,976,830	1,642,611	14,341,447	5,495,501	2,085,210	6,788,473
1934	7,498,270	2,336,224	2,731,420	21,662,391	7,447,799	1,988,371	8,835,473
1935	7,333,681	3,171,813	3,890,798	23,577,954	9,421,217	2,251,215	11,331,071
1936	9,470,848	—	4,184,929	28,563,890	12,697,653	2,590,738	15,177,776
1937	12,438,256	—	5,558,253	48,236,336	14,827,568	3,640,077	40,713,451
1938	11,049,324	—	4,280,866	80,193,416	16,197,385	5,045,655	92,147,043

PRODUCTION OF MISCELLANEOUS INSTRUMENTS

(Value in yen)

Year	Safes	Gas Utensils	Water-service Apparatus	Valves, Cocks, etc.	Fly Wheels, Gears, Axles, etc.	Fittings and Other Accessories	Others
1931	1,200,092	406,968	1,136,255	1,641,080	5,962,705	11,660,398	32,121,271
1932	1,264,764	723,906	2,019,744	2,369,581	7,714,205	29,484,929	48,954,102
1933	1,486,533	1,049,967	1,610,242	3,623,998	14,310,795	38,256,100	72,104,704
1934	1,588,840	970,178	1,899,536	7,155,687	14,622,842	46,770,100	89,859,874
1935	1,785,588	1,913,606	1,571,696	8,270,095	21,689,987	85,077,533	98,318,435
1936	2,353,585	1,219,673	1,972,403	12,037,373	18,503,304	99,472,973	299,660,394
1937	2,741,006	1,895,527	3,004,867	20,338,559	35,858,286	151,883,655	465,386,885
1938	2,602,225	1,846,087	1,473,012	30,920,760	67,144,351	331,910,568	1,384,485,596

PRODUCTION OF MUSICAL INSTRUMENTS, etc.

(Value in yen)

Year	Pianos	Organs	Violins, etc.		Total	Gramophones	Arms
			Mandollins,	Others			
1930	1,878,800	1,016,210	119,188	1,147,472	4,161,070	2,096,439	13,141,067
1931	2,078,406	1,199,649	77,464	910,694	4,266,213	2,811,850	13,443,520
1932	1,907,456	941,951	52,184	994,383	3,868,974	3,110,657	23,185,829
1933	2,325,781	961,622	96,027	1,421,028	4,804,458	4,657,102	32,217,961
1934	2,465,038	931,591	134,802	1,943,023	5,474,454	6,355,129	42,162,028
1935	2,619,122	991,996	179,771	2,353,701	6,144,590	5,347,772	59,914,364
1936	2,788,388	929,808	249,192	2,600,399	6,567,787	5,614,129	57,179,357
1937	2,985,431	1,019,772	260,031	2,980,118	7,245,352	5,667,568	86,772,732
1938	1,559,997	551,679	267,601	2,626,727	5,006,004	5,659,690	—

PRODUCTION OF SCIENTIFIC AND MEDICAL INSTRUMENTS AND TESTING MACHINES, etc.

(Value in yen)

Year	Experimental and Testing Machines	Scientific Instruments	Surgical, or Orthopaedic Instruments	Surveying and Drawing Instruments	Registers,	Cameras,
					Typewriters, Adding Machines, etc.	Magie Lanterns, Movie Cameras, etc.
1930	496,019	918,322	2,284,228	564,193	1,274,223	746,914
1931	481,364	476,407	1,902,771	427,924	1,388,942	1,126,227
1932	428,942	585,089	2,372,813	978,680	2,021,363	917,335
1933	1,414,604	871,644	4,572,566	778,229	2,157,272	1,085,272
1934	1,604,568	1,063,271	4,167,285	925,448	3,590,114	1,587,971
1935	1,469,971	1,879,028	4,970,556	1,153,736	3,697,656	2,570,575
1936	1,908,867	1,671,733	6,124,429	1,231,638	5,222,226	3,270,352
1937	4,124,885	2,635,676	6,503,048	1,866,674	8,152,960	5,183,197
1938	5,454,593	4,710,674	13,125,623	3,548,253	10,341,336	7,943,095

PRODUCTION OF ELECTRICAL MACHINERY

(Value in yen)

Year	Dynamios		Electric Motors		Rotary Converters	
	No. Produced	Value	No. Produced	Value	No. Produced	Value
1930	10,914	4,415,105	115,420	14,795,641	136	1,578,456
1931	3,953	4,865,869	88,083	10,369,400	1,161	1,082,559
1932	9,748	4,638,302	99,809	9,886,162	1,461	599,177
1933	58,600	7,720,547	195,005	21,553,794	1,269	1,470,000
1934	26,378	11,243,516	387,750	34,750,828	703	1,358,357
1935	13,285	14,784,166	374,319	43,914,591	10,042	1,776,216
1936	46,457	19,059,308	397,242	45,081,810	1,622	1,695,975
1937	51,085	21,067,519	281,302	50,951,124	1,944	1,385,897
1938	44,140	30,842,787	498,877	97,576,181	3,914	1,275,187

Year	Frequency Changers		Transformers		Rectifiers	
	No. Produced	Value	No. Produced	Value	No. Produced	Value
1930	8	109,278	387,333	9,307,652	3,628	160,218
1931	6	22,251	341,561	5,883,660	275	315,327
1932	11	12,184	290,887	6,618,334	2,881	156,547
1933	3	14,006	324,167	9,976,542	1,097	278,657

Year	Frequency Changers		Transformers		Rectifiers	
	No. Produced	Value	No. Produced	Value	No. Produced	Value
1934	2	6,280	416,970	15,400,423	3,640	238,892
1935	2	13,276	288,774	19,936,149	19,588	523,097
1936	21	242,815	202,606	26,259,229	11,277	781,886
1937	18	4,260	261,737	35,126,286	10,482	915,674
1938	—	—	341,809	51,700,997	35,191	2,602,907

Year	Electric Fans		Electric Heaters		Insulated Wires	Cables
	No. Produced	Value	No. Produced	Value	Value	Value
1930	88,047	1,855,294	218,797	989,583	27,134,916	18,051,756
1931	44,019	761,538	535,869	1,130,569	21,441,985	10,421,985
1932	35,328	610,008	542,766	1,311,409	26,329,442	10,189,503
1933	46,041	866,070	733,819	1,415,757	39,487,609	17,850,301
1934	76,234	1,188,010	985,948	2,124,990	42,929,887	16,185,546
1935	45,342	911,892	912,524	2,646,725	56,721,405	21,920,622
1936	97,484	1,670,406	722,452	2,527,817	65,799,222	36,591,859
1937	110,434	2,592,883	772,140	3,986,756	98,875,009	61,054,819
1938	84,862	2,647,497	663,326	3,311,395	135,088,936	44,264,407

PRODUCTION OF ELECTRICAL INSTRUMENTS

(Value in yen)

Year	Instruments for Wireless Communication	Instruments for Telegraphic & Telephonic Communications	Electric Batteries Storage Batteries	
	Value	Value	No. Produced	Value
1930	6,357,315	9,109,054	205,753	4,144,403
1931	9,582,428	6,284,448	206,278	3,337,901
1932	11,552,221	7,034,435	281,980	3,425,373
1933	19,293,426	7,696,588	358,871	4,819,752
1934	26,420,734	13,143,143	154,111	6,575,986
1935	24,591,013	12,824,613	101,984	7,566,928
1936	59,816,291	—	131,520	8,235,060
1937	80,746,200	—	185,746	15,283,967
1938	123,796,247	—	190,067	20,515,763

Year	Dry Cells		Electric Batteries	Other Electrical Instruments
	No. Produced	Value	Total Value	
1930	70,576,043	9,658,359	13,802,762	29,294,850
1931	23,552,992	4,242,700	7,580,601	21,929,303
1932	33,032,783	5,172,392	8,597,765	24,167,329
1933	41,729,522	6,636,878	11,456,635	39,175,923
1934	51,425,306	7,268,713	13,844,699	50,722,078
1935	69,600,657	8,513,616	16,080,544	78,233,349
1936	79,696,249	8,267,764	16,502,824	79,232,599
1937	84,883,948	11,165,184	26,449,151	99,511,612
1938	104,344,675	16,987,542	37,503,305	143,810,983

PRODUCTION OF ELECTRIC BULBS, SEARCHLIGHTS, etc.

(Value in yen)

Year	Electric Bulbs		Searchlights		Others	Total
	No. Produced	Value	No. Produced	Value	Value	Value
1930	114,811,775	15,192,305	20,752	2,400,744	3,539,177	21,132,225
1931	202,054,444	18,038,888	—	968,606	3,459,829	22,467,323
1932	286,653,068	19,685,338	169	831,379	4,692,485	25,209,302
1933	340,392,875	21,970,879	174	679,973	6,942,939	29,593,791
1934	310,750,142	19,997,704	154	893,804	7,115,004	28,006,512
1935	308,683,271	21,209,930	283	100,473	9,040,724	30,351,127
1936	294,034,025	21,357,909	—	108,897	10,732,675	32,199,481
1937	332,822,266	28,820,274	116	351,477	17,868,915	47,040,666
1938	259,869,778	29,386,419	150	73,300	17,589,997	47,049,716

PRODUCTION OF LOCOMOTIVES AND ROLLING STOCK

(Value in yen)

Year	Steam Locomotives		Electric Locomotives		Gas Locomotives		Fittings, etc.	Total Value
	No. Produced	Value	No. Produced	Value	No. Produced	Value		
1930	233	9,400,007	41	884,035	129	1,192,624	270,255	11,798,481
1931	109	5,029,536	47	1,506,247	103	1,454,003	216,223	8,206,009
1932	60	2,976,606	47	503,464	223	1,333,485	298,250	5,111,805
1933	167	6,270,177	29	609,386	288	1,486,822	1,340,408	9,706,783
1934	192	12,485,274	71	2,392,319	236	824,323	1,091,564	16,793,481
1935	347	21,878,540	51	846,003	336	2,196,869	812,492	25,733,904
1936	424	26,190,414	56	1,619,549	490	3,289,994	5,461,250	36,633,207
1937	435	25,009,198	50	1,775,408	723	4,557,331	8,802,674	40,144,611

Year	Coaches & Freight Cars		Electric Cars		Rikisha		Waggons		
	No. Produced	Value	Fittings for No. Produced Coaches & Freight Cars Value	Fittings of No. Produced Electric Cars Value	No. Produced	Value			
1930	3,831	9,306,425	1,582,700	355	3,607,416	3,672,732	947	75,610	161,005
1931	1,508	3,881,066	221,088	180	2,019,861	1,492,455	1,448	72,060	165,710
1932	1,106	3,980,922	181,345	178	1,259,789	213,153	489	50,400	458,515
1933	1,452	8,064,776	853,179	129	1,663,722	501,857	550	58,220	341,099
1934	2,640	15,070,988	2,703,857	189	1,530,634	285,731	848	64,561	118,757
1935	4,804	18,986,601	3,035,150	237	2,783,499	225,086	760	62,660	216,087
1936	6,201	21,547,844	10,854,654	199	2,353,285	2,684,690	40	8,000	67,249
1937	8,882	20,092,279	13,010,064	383	5,951,990	5,404,922	650	64,750	183,674
1938	—	—	—	—	—	—	470	56,156	97,054

Note: In all the tables given above the value does not represent the value of the given number produced, because it includes value for production the number of which is not clearly reported.

Aircraft

Introduction Captain Tokugawa was the first pilot to fly a heavier than air machine in Japan. This was in 1910. The manufacture of aircraft was commenced in the Army and Navy arsenals and manufacture under licence was carried out by private companies. In this way the manufacture of aeroplanes was greatly encouraged and military

and naval aircraft can now be satisfactorily manufactured in the country.

History Dr. Ichita Kishi, a physician constructed at his own expense various workshops in his own residence at Tsukiji, Tokyo, and, in 1914, with the help of several expert engineers, succeeded in constructing an aeroplane engine, the first to be manufactured in this country. A trial flight of the aero-

plane using this engine was very successful, so he manufactured his second aeroplane in 1916. In 1917, Mr. Nakajima, a retired engineer captain of the Navy, manufactured various kinds of aeroplane with the help of Messrs. Mohel Ishikawa and Seibel Kawanishi. In 1920, the Aichi Tokai Denki Kaisha, Ltd. (Aichi Clock Electric Machinery Co., Ltd.) established an aeroplane department and in the same year turned out a seaplane. From that time this department has developed rapidly. In 1921, the Kawanishi Machine Company established an aeroplane factory in Hyogo, and started the manufacture of seaplanes in 1923. Also, in 1921, the Mitsubishi Aircraft Co., Ltd., brought nine experts in aeroplane manufacturing from Great Britain and began to manufacture both aeroplanes and engines on a large scale. The Kawasaki Shipbuilding Co., Ltd., following in the steps of the Mitsubishi Aircraft Co., Ltd., began manufacturing aeroplanes in 1922.

Present State of the Industry The aircraft manufacturing industry has shown considerable activity in recent years. Aside from military requirements, manufacturers have received good orders from public bodies who have raised subscriptions to donate aeroplanes to the army and navy. Japanese manufactured civil planes have had many successes of late and orders have been coming in for these. Manufacturers of aircrafts at present are as follows:

MANUFACTURES OF AIRCRAFT

Year	Makers of	Makers of
	Bodies and Motors	Balloons and Airships
1930	6	3
1931	7	2
1932	7	2
1933	8	2
1934	8	2
1935	8	2
1936	9	2

Automobile Manufacturing

History The first automobile to be manufactured in Japan was by the Tokyo Motor Car Works, under the management of Mr. S. Yoshida, in the

Note: Conditions of aircraft and automobile industries since 1937 are not made public.

year 1909, but until the present progress has been very slow. In 1910, several military motor cars were manufactured for the Army in the Osaka Arsenal, and in 1911, the Tokyo Automobile Factory commenced the manufacture of "DAT" cars.

The Tokyo Gas and Electric Co., Ltd., began to manufacture military automobiles "T.G.E." in 1916, and trucks in 1917. In 1918, the Military Automobile Subsidy Act was put into force and this company was the first to get a subsidy from the Army Ministry under the act. In 1920 the Tokyo Ishikawajima Shipbuilding Co., Ltd., began to manufacture passenger cars. Companies other than the above which are making automobiles are Hakuyosha, Ltd., and the Oriental Automobile Co.

Present State of the Industry The motor car industry is perhaps the only one of all the heavy industries in Japan of which the country has nothing to its credit today. While there were, in 1936, more than 176,000 cars, buses and trucks of all kinds in the country, almost all of them were imported, about 80 per cent of them being Chevrolet and Fords. Of the balance, a considerable number are other American and European makes.

Passenger Cars The "Atsuta-go," modelled after the Nash and White, and from this year, the "Nissan" are the only passenger cars manufactured in Japan aside from the baby cars.

Buses and Trucks Bus and truck manufacturing is slightly better than passenger car making. The "Chiyoda" manufactured by the Tokyo Gas and Electric Co., and the "Sumida" made by the Jidosha Kogyo Kaisha have long histories. These companies are also jointly making the "Isuzu," designed by the Ministry of Commerce and Industry. These three classes of buses and trucks are supplied to the market in considerable numbers. Kyodo Koku-sai Jidosha, which was established in 1933 by these two companies, is selling domestic trucks and buses of five classes. The Mitsubishi Heavy Industry Co., Ltd. is making the large-sized bus "Fuso-go" at its Kobe plant, the Kawasaki Sharyo Kaisha, Ltd. the truck and bus "Rokko."

Baby Cars and Motor Cycles Small motor cars are defined, in dimensions

and power, by the "Regulations of Motor Cars" and include such small-sized cars as the "Datsun" car, rear cars, etc. Rear cars have made a marvellous development in Japan as a means of carrying small parcels. Their production totals 15,000 a year, for they are not only in use throughout Japan but are exported to Manchoukuo, the South Sea Islands, etc. The sales of small-sized cars like the "Datsun," are rapidly increasing.

Accessories and Parts Accessories and parts of motor cars used in Japan were almost exclusively of American make before replacement of the embargo on gold in 1931. Owing to the low exchange rate which followed thereafter their importation became very difficult and domestic makes took their place. At present, even Chevrolet and Ford parts are being replaced by domestic makes. They are also being exported.

PRODUCTION OF AUTOMOBILES AND MOTOR CYCLES

(Value in yen)

Year	Imported Parts Assembled		Others		Accessories and Parts		Total		Motor Cars	
	No.	Value	No.	Value	Value	Value	No.	Value	No.	Value
1930	20,596	34,903,822	1,254	3,026,252	4,493,958	43,024,032	793	413,808		
1931	19,935	32,099,506	971	2,576,231	6,535,494	41,211,231	1,451	826,320		
1932	13,853	28,869,297	710	4,748,608	6,095,992	39,703,897	2,113	1,619,279		
1933	14,373	37,690,059	1,657	9,493,251	10,960,059	58,143,369	4,613	3,651,570		
1934	29,889	75,955,529	2,770	15,671,197	22,736,076	114,362,802	7,750	6,029,283		
1935	27,021	69,928,985	5,307	22,908,967	28,234,962	121,072,914	8,845	7,342,114		

Imports of Automobiles In 1914 imports barely amounted to ¥500,000, but by 1929, they amounted to ¥30,000,000. Owing to the depression there was a drop to ¥20,000,000 in 1930, and to ¥14,-

000,000 in 1933. The figures then took an upward course, rising to ¥32,302,000 in 1934, ¥32,589,000 in 1935, ¥37,036,000 in 1936, and ¥30,682,000 in the first half of 1937.

IMPORTS OF AUTOMOBILES AND ACCESSORIES

(Value in yen)

Year	No. of Automobiles	Value	Value of Accessories	Total Value
1930	2,591	4,896,992	15,178,000	20,773,000
1931	1,887	3,378,000	12,951,000	16,329,000
1932	897	2,894,000	11,927,000	14,821,000
1933	491	1,864,392	12,517,753	14,382,145
1934	896	3,357,061	28,945,163	32,302,224
1935	943	3,302,241	29,387,106	32,589,347
1936	1,117	3,577,000	33,459,000	37,036,000
1937 (Jan.-July)	895	3,009,000	27,673,000	30,682,000

Note: Details of conditions of the industry and the trade in automobiles are not published since 1937.

Bicycle Manufacturing

History A bicycle was first introduced into Japan in 1881 by an Englishman. In 1889, an American brought a bicycle with him from America. In 1904, frames and other accessories were imported from Great Britain, and the making of bicycles at a lower cost became comparatively easy and bicycles became very popular.

Before 1913, accessories other than

saddles, rims, and chains were being manufactured at home. Factories capable of manufacturing these latter articles on a large scale did not exist and it was impossible for small scale producers to compete against foreign products. From 1913 on, however, the demand for bicycles increased at great speed, and as the manufacturing of each of the above parts on a large scale became possible, bicycles came to be produced at a very low cost, though until

the World War, those manufactured in Japan could not compete with European-made ones. During the War, the art of manufacturing advanced so much that domestic bicycles could well compete in both quality and price with imported ones, and not only were home demands satisfied, but the Japanese product was exported to China, Russia, India and other countries.

Conditions Suitable for Bicycles Conditions in this country are well suited to the use of this vehicle. The factors which have made for the increased demand are:

(1) Individual wealth is comparatively small and the use of automobiles has not yet become universal.

(2) Roads are mostly too narrow, though greatly improved of late, to take automobiles.

(3) The making of bicycles, especially accessories like rims, is purely artisans' work, and is a type of work in which the Japanese manufacturers excel.

PRODUCTION OF BICYCLES IN JAPAN

(Value in yen)

Year Produced	No.	Value of Accessories Produced	
		Value	Value of Accessories Produced
1930	136,985	2,790,331	12,206,374

Year Produced	No.	Value of Accessories Produced	
		Value	Value of Accessories Produced
1931	105,088	2,022,013	13,747,235
1932	63,988	1,315,748	20,666,605
1933	118,405	2,164,804	26,396,495
1934	152,920	2,542,376	34,462,225
1935	90,885	2,260,889	38,889,853
1936	145,791	5,210,056	44,044,488
1937	138,895	2,977,815	50,889,157
1938	92,084	4,528,251	48,534,553

The principal places of production are Tokyo, Osaka, Aichi, Hyogo, Gifu and Fukuoka prefectures.

Imports and exports of cycles and accessories since 1930 are as follows:

Year	Imports and Exports (In yen)	
	Imports	Exports
1930	1,563,000	5,274,000
1931	1,153,000	7,119,000
1932	795,000	6,028,000
1933	619,000	12,114,000
1934	73,308	18,904,257
1935	85,545	17,436,446
1936	27,000	20,575,000
1937	—	23,451,000
1938	—	13,650,000
1939	—	18,063,000

Note:—Tyres are not included.

SHIPBUILDING

Introduction

The mercantile shipbuilding industry in Japan developed with the shipping business, while the development of warship building was mainly due to the urgent demands created by the Sino-Japanese and the Russo-Japanese Wars.

Owing to the construction of new vessels to be placed on subsidized lines, easy money and low interest rates, the shipbuilding industry which had been depressed since the close of the World War, revived and boomed temporarily in 1928. Tonnage output, which in 1919 amounted to as much as 674,000 tons, dropped to 53,000 tons in 1926. This was increased to 112,583 tons in 1928 and to 167,365 tons in 1929. However, as the improvement was brought about artificially and not by general improvements in economic conditions, the industry soon became dull again,

and was further depressed by the enforcement of the conditions of the London Disarmament Agreement. Naval orders to private shipbuilding companies were reduced by 30%, which, together with the decreased orders from private transportation companies reduced the 1931 output to 84,004 tons and in 1932 to 58,763 tons.

Owing, however, to the subsidies granted by the Ministry of Communications since 1932 for the improvement of steamers, the shipbuilding industry has been fairly active. The subsidies were granted with an aim of constructing 200,000 tons of new steamers, and closed at the end of March 1935. In addition to this, due to the low exchange rate, enquiries for steamers are forthcoming from Brazil, Thailand, Italy, France, Sweden, Soviet Russia, Manchoukuo, China, etc. (See Chapter XXVI, Sea Transportation.)

PRODUCTION OF VESSELS

(Value in yen)

Year	Steel Vessels		Ships Other Classes		Total Value	Fittings of Ships
	No.	Value	No.	Value		
1930	269	111,590,483	2,376	3,547,239	115,137,722	807,727
1931	245	34,991,786	1,840	3,184,897	38,176,683	638,378
1932	509	44,224,379	1,987	1,880,400	45,104,979	475,363
1933	335	37,208,750	2,558	2,767,288	38,976,038	316,170
1934	277	53,481,053	2,588	3,994,369	57,475,422	448,353
1935	328	81,875,746	2,234	4,875,522	86,751,268	836,511
1936	355	104,184,841	2,864	6,541,823	110,926,664	949,253
1937	581	208,820,307	4,578	16,503,625	225,323,932	2,472,764
1938	—	—	—	—	—	829,049

NUMBER OF DOCKYARDS, EMPLOYING MORE THAN 5 PERSONS
AND THOSE EMPLOYED

End of	Dockyards	Officials	Technicians	Operatives	Others	Total
1930	—	2,224	3,002	38,036	3,675	46,937
1931	—	2,053	2,805	33,439	1,207	39,514
1932	—	1,832	2,495	33,611	1,262	39,200
1933	360	2,069	2,677	39,068	1,878	45,692
1934	394	2,267	3,026	50,116	1,520	56,929
1935	395	2,302	3,416	53,918	1,692	61,328
1936	444	2,636	3,520	70,053	2,046	78,255
1937	559	3,874	5,019	89,736	2,532	101,161

Note: The publication of figures for most of the items has ceased.

Trade in Machinery

Imports of Machinery

Imports of machinery in 1939 totalled ¥288,212,000 against ¥313,362,000 for 1938.

Imports of machinery by Japan, excluding automobiles and their accessories, from 1919 to 1928, were some-

where between ¥100,000,000 and ¥140,000,000. There was a sharp reduction in 1930, and in 1931 the bottom was reached, but since then there has been a yearly increase, although the year 1939 showed a decrease by ¥25,000,000 from the previous year. (See Chapter XI.)

IMPORTS OF MACHINERY

(In ¥1,000)

Articles	1934	1935	1936	1937	1938	1939
Watches, and parts thereof	2,684	4,021	3,742	5,645	2,893	562
Clocks, and parts thereof	191	170	299	338	192	66
Microscopes, etc.	230	279	301	394	156	168
Ammeters, voltmeters, etc.	64	60				
Wattmeters	63	74	2,711	3,263	1,694	2,129
Other meters	1,479	2,246				
Surgical or orthopaedic instruments	200	238	118	249	129	161
Surveying and drawing instruments	97	515	256	385	790	957
Registers, calculating machines, typewriters, etc.	1,020	1,247	2,001	2,012	150	—
Scientific instruments	1,003	1,529	1,265	2,698	1,414	3,008
Cameras, and parts thereof	1,418	2,582	3,949	6,392	1,209	427
Musical instruments	182	197	240	319	119	—
Telegraphic and telephonic instruments	1,468	1,513	1,292	1,939	3,478	1,787

Articles	1934	1935	1936	1937	1938	1939
Fire-arms	1,031	1,117	—	—	—	—
Railway carriages, and other vehicles	—	—	44,677	58,791	63,517	31,732
Boilers	4,090	6,109	3,930	5,286	5,560	3,476
Fuel economizers	393	732	329	166	462	754
Steam turbines	430	1,331	1,385	1,055	411	671
Internal combustion engines (weighing not more than 250 kg.)	3,253	343	—	—	—	—
Internal combustion engines (weighing not more than 2,500 kg.)	17,277	14,801	—	—	—	—
Internal combustion engines (others)	247	413	—	—	—	—
Water-turbines and Pelton wheels	150	90	15	8	163	—
Dynamos, motors, etc. (weighing not more than 100 kg.)	829	1,044				
Dynamos, motors, etc. (weighing not more than 5,000 kg.)	145	209				
Dynamos, motors, etc. (others)	248	1,003	1,805	1,841	2,766	2,089
Transformers	85	75				
Dynamos combined with motive machinery	2	6				
Cranes	12	7	—	14	397	226
Capstans and other winding machines	35	90	86	193	—	—
Gas compressors	1,742	1,053	1,815	2,318	2,522	942
Sewing machines and accessories	5,806	6,473	7,939	10,574	386	153
Pumps	999	711	760	1,257	1,947	1,987
Blowing machines	231	192	591	790	400	263
Hydraulic presses	54	1,480	31	146	445	3,598
Pneumatic tools and machines	638	587	634	789	433	391
Metal or wood-working machines	21,433	18,295	—	—	—	—
Spinning machines	6,394	4,612	2,278	3,103	1,635	—
Tissue-finishing machines	62	264				
Weaving looms	40	224	238	384	—	103
Knitting machines	1,773	1,645	410	709	234	—
Paper-making machine	—	616	284	418	1,325	—
Printing machines	224	502	400	754	331	—
Card clothing	—	3,869	1,911	2,309	441	157
Felt for paper making	—	1,250	1,340	1,547	838	587
Rolls and rollers	—	916	576	473	482	1,329
Milling-cutters, gear-cutters, etc.	—	417	434	757	844	1,733
Handicraft and agricultural machines	—	1,287	1,451	2,285	428	—
Total including others	—	—	153,087	242,235	313,358	288,212

Note: Figures for fire-arms, internal combustion engines and metal or wood working machines are not made public.

Exports of Machinery

In 1939 Japan witnessed the highest record in exports of machinery of her own making. The value of exports was ¥370,323,000. The future of Japan's machinery manufacturing depends upon the degree to which her exports expand, and especially upon the development of the market in Asiatic countries. The invasion of Japanese products into the Dutch East Indies, British

India and other foreign markets is a matter of future prospect. The exportation of Japanese made spinning and weaving machines is very promising. The Toyoda Automatic Weaving Machines are very much in demand wherever the spinning industry is prosperous. Diesel-engines to be fitted into fishing vessels are built in Japan and shipped to the Dutch East Indies. Japanese made machines exported during the last 4 years follow:

	1936	1937	1938	1939
	(In ¥1,000)			
Hanging clocks	1,584	2,083	1,333	2,064
Table clocks	1,916	2,442	1,096	679
Surgical instruments	2,516	3,390	3,330	3,757
Electric batteries	1,909	2,262	3,233	3,999
Meters	1,543	2,270	3,097	4,980
Physical and chemical instruments	1,204	2,553	1,486	2,341
Musical instruments	693	850	786	1,037
Telephonic instruments	5,562	6,663	10,043	11,502
Phonographs	4,491	5,225	5,384	6,029
Measuring instruments	1,239	2,104	1,570	2,073
Steam boilers	1,731	3,580	4,405	5,514
Motors and dynamos				
Transformers				
Switch boards	15,963	15,773	26,613	34,764
Other electrical machinery				
Pumps	1,952	2,917	5,246	7,895
Metal or wood working machinery	4,907	6,233	10,324	25,532
Spinning machinery	15,121	25,440	29,984	24,413
Weaving machines				
Printing machines	1,000	1,448	2,197	2,561
Locomotives	15,087	9,314	16,338	24,468
Railway carriages and other vehicles	58,810	61,478	57,148	100,793
Ships	8,165	23,148	16,756	13,211
Cranes	1,417	1,740	3,868	4,948
Internal combustion engines	4,058	4,685	4,995	5,755
Sewing machines	575	1,037	651	916
Total including others	174,541	227,699	267,237	370,323

CHAPTER XX

PUBLIC UTILITIES



NIPPON HASSODEN K.K.

(Nippon Electric Generation
& Transmission Co., Ltd.)

President:
YOSHIZO IKEO

Koishikawa-ku, Tokyo,
Nippon



Manufacturers of Electric Goods THE MATSUSHITA ORGANIZATION

Matsushita Kandenchi K.K.
Matsushita Musen K.K.
Matsushita Denki, K.K.
Matsushita Denki
Kogyo K.K.
Matsushita Kinzoku K.K.
Matsushita Kogyo K.K.
National Denkyu K.K.
National Chikudenchi K.K.
National Kogyo K.K.
Beamlight Seisakusho K.K.
Matsushita Denki Shoji K.K.
Matsushita Denki
Tokyo Hambai K.K.
Matsushita Denki
Kyushu Hambai K.K.
Kyushu Matsushita
Shoji K.K.
Manshu Matsushita
Denki K.K.
Matsushita Dengyo K.K.

GENERAL HEAD OFFICE:

MATSUSHITA DENKI SANGYO K.K.

KADOMA-CHO, OSAKA, NIPPON

EXPORT & IMPORT OFFICE:

MATSUSHITA DENKI BOEKI K.K.

(Matsushita Electric Works, Ltd.)
Ohiraki-cho 2-chome, Konohana-ku,
OSAKA, NIPPON



SUMITOMO ELECTRIC INDUSTRIES, LTD.

60, OKIJIMA MINAMINO-CHO, KONOYAMA-KU, OSAKA, JAPAN

CAPITAL ¥ 50,000,000

Established 1897

Manufacturers and Exporters of

1. Bare wires and cables.
2. Insulated wires and cables.
 - (a) Rubber insulated wires and cables.
 - (b) Flexible cords and cables.
 - (c) Paper insulated lead covered cables.
 - (d) Weatherproof braided wires and cables.
 - (e) Submarine cables for telephone and telegraph service.
 - (f) Miscellaneous.

Cotton or silk covered wires, enamelled wire, Paraffined wire, Asbestos braided wires, Cambric wires, etc.
3. Cable Accessories:

Joint boxes, terminal boxes, compound.
4. Miscellaneous.

"Igetalloy" (hard alloy for dies and tools), Oil-Filled static condensers, etc.

Products are also made according to customers' particular specifications.



SHOWA DENKO K.K.

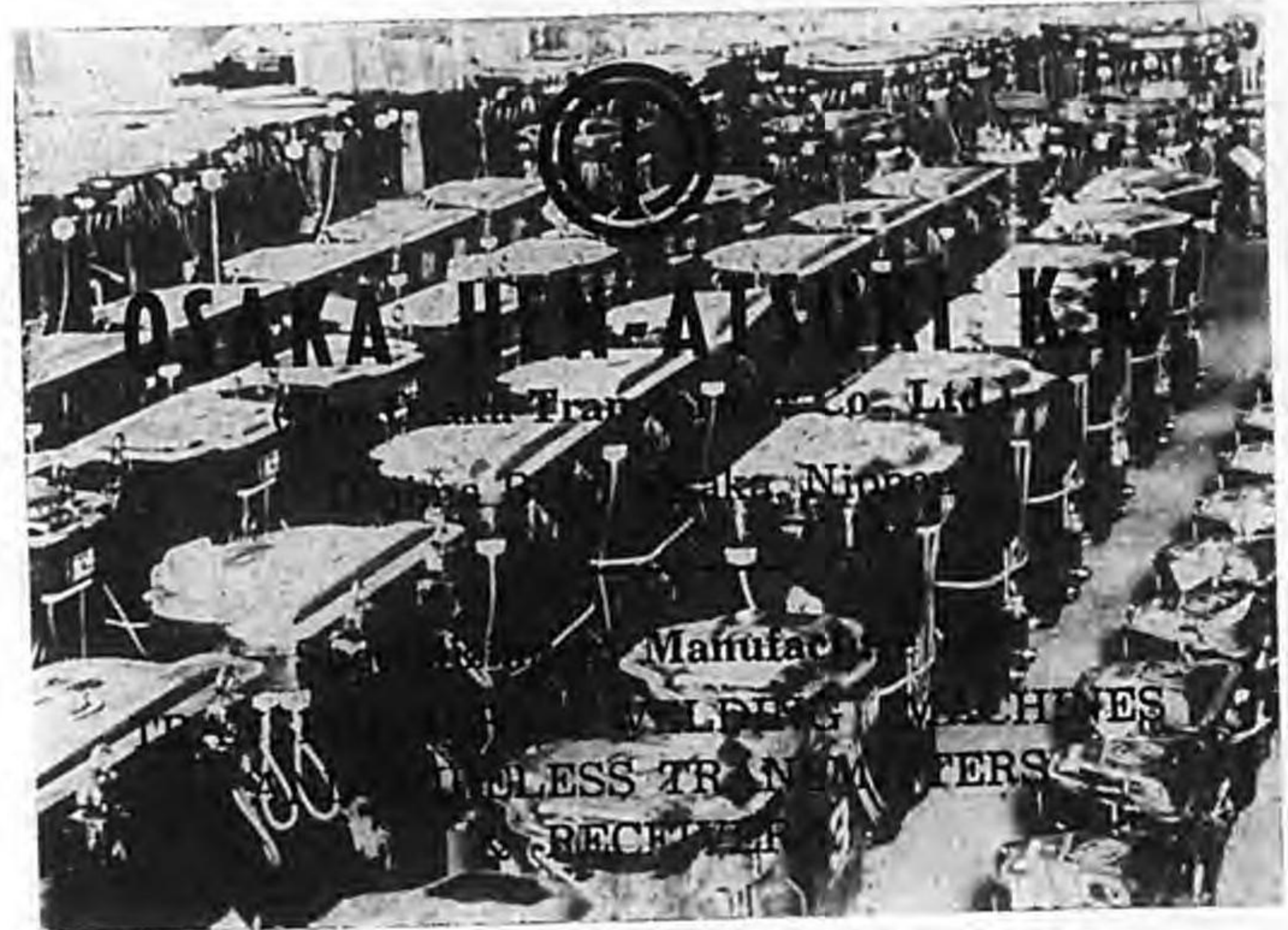
President: CHUJI SUZUKI

CAPITAL: ¥ 110,000,000

PRINCIPAL PRODUCTS:

Chemical Fertilizers, Industrial Chemicals, Aluminium, Ferro-Alloys, Abrasives and Electrodes

7, Takara-machi 1-chome, Kyobashi-ku, Tokyo



Hot Water On Tap!



**FOR QUICK SERVICE,
DEPENDABILITY,
CHEAP OPERATION,
GENERAL SATISFACTION
IN UPKEEP,
INSTALL A GAS BOILER**

TOKYO GAS CO., LTD.
KAIJO BUILDING,
TOKYO

CHAPTER XX

PUBLIC UTILITIES

Electricity

Important items of the electric industry are not made public since October 1937.

But, at the end of October 1939, the number of companies engaged in the electric business was 618, consisting of 439 suppliers, 143 electric railways and 36 electric railways supplying electricity to others. Private electric plants numbered 10,765 at the end of 1937. The aggregate capital of the 618 companies was ¥5,892,121,824.

ELECTRIC POWER CAPACITY FOR INDUSTRIAL PURPOSES

(In kw.)

End of	Hydro-electric	Thermal	Others and Total
1930	2,797,637	1,601,677	4,399,314
1931	3,056,936	1,599,588	4,656,524
1932	3,105,930	1,827,131	4,933,061
1933	3,168,705	1,912,037	5,080,742
1934	3,268,834	2,223,113	5,491,947
1935	3,407,997	2,638,572	6,046,569
1936	3,759,334	2,924,778	6,777,422
1937	3,978,000	3,297,000	7,277,000
1938	—	—	7,529,673
(Oct.)	—	—	7,529,673

TOTAL VOLUME OF ELECTRIC POWER GENERATED FOR LIGHTING AND INDUS- TRIAL PURPOSES

(In kw. h.)

		Rate of Increase
1930	12,160,082,885	—
1931	11,892,215,264	—
1932	12,557,696,988	5.6
1933	16,961,724,058	35.1
1934	18,793,610,146	10.8
1935	21,548,700,173	14.7
1936	24,132,870,000	8.9
1937	26,582,570,000	—

GROWTH OF DEMAND FOR POWER FOR LIGHTING

End of	No. of Consumers	No. of Lamps
1930	11,352,372	36,839,607
1931	11,446,539	37,413,988
1932	11,530,440	38,048,413
1933	11,383,235	38,382,771
1934	11,715,694	40,532,219
1935	11,948,953	42,477,828
1936	12,176,098	44,405,699
1937	12,568,725	46,969,219
1938	12,872,071	49,351,160

ELECTRIC LIGHTING IN VARIOUS PREFECTURES AT THE END OF 1935

(Number of lights per 100 persons)

Prefecture	No.	Prefecture	No.	Prefecture	No.	Prefecture	No.
Tokyo	123.8	Yamanashi	36.4	Osaka	87.4	Hiroshima	61.9
Kanagawa	87.2	Aichi	70.6	Kyoto	125.6	Tottori	47.8
Saitama	43.4	Miyé	50.3	Hyogo	83.0	Shimané	50.0
Gumma	45.4	Gifu	54.3	Nara	64.7	Okayama	60.8
Chiba	40.6	Nagano	49.3	Shiga	57.0	Yamaguchi	55.8
Ibaraki	27.9	Fukui	75.4	Wakayama	59.4	Kagawa	50.6
Tochigi	35.7	Ishikawa	70.7	Tokushima	44.0	Ehimé	47.2
Shizuoka	57.0	Toyama	58.5	Kochi	45.1	Kumamoto	51.2
Nagasaki	38.9	Miyazaki	39.7	Niigata	50.4	Yamagata	36.4
Fukuoka	57.4	Kagoshima	29.0	Fukushima	31.5	Akita	29.9
Oita	54.9	Okinawa	6.8	Iwaté	26.0	Hokkaido	37.7
Saga	48.0	Miyagi	40.2	Aomori	37.2	Average	61.3

POWER SUPPLYING COMPANIES				
Year	Generating Water	Pur- Steam chasing	Total	
1933:				
Opened	345	56	417	818
Unopened	7	3	15	25
Total	352	59	433	843
1934:				
Opened	331	60	413	804
Unopened	11	3	12	26
Total	342	63	425	830
1935:				
Opened	319	59	410	788
Unopened	12	3	15	30
Total	331	62	425	818
1936:				
Opened	307	64	396	767
Unopened	13	7	14	34
Total	320	71	410	801
1938 (Oct.)				
Opened	—	—	—	829
Unopened	—	—	—	32
Total	—	—	—	861
1939 (Oct.)				
Opened	—	—	—	618
Unopened	—	—	—	23
Total	—	—	—	641

CONSUMPTION OF ELECTRIC POWER BY INDUSTRIES

(Compiled by the Ministry of Communications)

(In 1,000 k.w. h.)

	1934	1935	1936	1937	1938
Fiber industry	1,424,818	1,689,579	1,802,421	2,638,405	2,244,899
Metal industry	1,200,700	1,666,182	2,219,902	2,796,626	4,850,078
Machine & tool manufacturing	292,408	373,872	466,466	988,677	1,327,433
Chemical industry	4,044,205	5,051,275	5,895,349	7,143,505	7,747,379
Ceramics industry	587,993	745,254	822,819	1,048,449	1,077,842
Foodstuffs	74,819	99,171	122,051	419,919	471,938
Total including others	9,264,568	11,380,327	13,265,696	15,666,012	18,587,369

Note:—Consumption by the mining industry is not included in the figures for 1937 and 1938.

Electricity in 1938 and 1939

The Nippon Has-so Den Kabushiki Kaisha (Japan Electric Power Generation and Transmission Company) The proposed plan of the new semi-Governmental electric company revealed by the Government on February 7, 1938 at the special committee of enquiry on the power control bill of the House of Representatives was as follows:

1. The company shall be capitalized at ¥880,000,000, of which ¥780,000,000 shall be obtained through conversion

PROFITS OF ELECTRIC INDUSTRY

Year	Paid-up Capital	Profit	Rate of Profit against Paid-up Capital
(In Yen)			
1929	3,019,222,000	301,900,000	10.0
1930	3,180,810,000	255,800,000	8.0
1931	3,234,181,000	227,061,830	7.0
1932	3,326,834,000	195,887,000	5.9
1933	3,494,202,000	183,100,000	5.2
1934	3,956,686,518	205,005,470	5.2
1935	4,124,389,526	225,730,583	5.5
1936	4,296,018,000	289,414,000	6.8
1937	4,515,848,000	307,038,000	6.8
1938	4,602,616,000	323,386,000	7.0

According to the report of the Ministry of Commerce and Industry on the business conditions of 337 power supplying companies in 1938 the aggregate capital amounted to ¥3,168,957,885, reserve fund ¥224,456,595, net profit ¥202,823,832, dividend ¥178,293,972.

of the fixed assets and rights of the existing companies and equipment and the new equipment to be installed in the first 2 years of the establishment of the company. The remaining ¥100,000,000 shall be raised from among the general public.

2. The construction plan of the company includes the establishment of the following plants over a period of ten years: Hydraulic generating plants with a capacity for 3,200,000 kw.; Thermal generating plants with a capacity for 4,500,000 kw.; Transmission

lines 13,000 km.; Transformer stations for 10,400,000 k.v.a. The expenses for the construction of the new plants and stations will amount to ¥1,890,000,000 during the 10 years after the establishment of the company in accordance with the 10-year program.

Business Plan When the 10-year program is complete the company will be able to supply electric power to the quantity of 7,300,000 kw. or over 45,000,000,000 kw. h. The income will be ¥526,640,000; the expenditure ¥446,990,000; net profit ¥79,650,000; dividend ¥60,200,000 (at 7 per cent); and reserves ¥19,450,000.

The capacity of generating and transmitting power will be as stated in the construction plan mentioned above in addition to 3,500,000 kw. of purchased electric power. The fixed assets of the company will be ¥2,670,000,000.

Start of the New Company The special commission for the valuation of the fixed assets and rights of the existing companies came, on December 14, 1938, to the conclusion that the total amount of their value for 33 electric companies reached ¥653,100,000, and decided on the capital of the new company as ¥753,100,000, adding to the above, another ¥100,000,000 which is to be obtained by flotation of shares. Of the 33 companies those companies which were valued at surpassing ¥10,000,000 were as follows:

Tokyo Electric Light Co.	¥136,700,000
Daido Electric Power	102,300,000
Nippon Electric	100,600,000
Kwansai Kyodo Electric	57,800,000
Toho Electric Power	40,600,000
Ujigawa Electric Power	35,800,000
Sanyo Central Electric	18,000,000
Kyushu Electric	17,000,000
Hiroshima Electric Power	16,500,000
Showa Electric Power	15,800,000
Yamaguchi Prefecture Electric	15,600,000
Chugoku Godo Electric	12,600,000

On April 1, 1939, the members of the Board of Directors were appointed and the arrangements with other companies involving the taking-over of staffs and employees and the transfer of assets and equipment were completed. The important contract in respect of the taking-over of electric power amounting to 2,200,000 kilowatts from fifty-two companies and of the supply of 3,400,000 kilowatts of electric power to 70

companies has been executed smoothly. The company enjoys no privilege in the way of exemption from taxes but debentures it issues have the guarantee of the Government, so that the company will have no difficulties in matters of finance.

Five-Year Plan In concert with the four-year plan for the expansion of industrial production and the plan for the mobilization of material resources, the Ministry of Communications, which controls the Japan Electric Power Generation and Transmission Company, formulated a five-year plan for the generation and transmission of electric power with a view (a) to develop electric power resources preferentially for military requirements, (b) to economize on materials used in the development of electric power resources and (c) to coordinate the technical installations which are in existence to increase their combined value. The plan is to be executed by the Japan Electric Power Generation and Transmission Company under the control of the Ministry of Communications. According to the plan, preference has been given to the development of electric power resources in Northern Kyushu, and other developments have been limited to localities where the transmission wires are at hand and can be coordinated and utilized because of being already in use by the member companies of the Japan Electric Power Generation and Transmission Company.

Attention has been paid also toward a coordinated development of water power resources, not only to generate electric energy economically but also to enhance the standard of efficiency in electric power generation. The minimum power capacity of generation for a new coal-power plant has been decided to be 25,000 kilowatts. The capacity of the trunk transmission wires has been increased from 150,000 to more than 250,000 volts. It has been decided, also, to make the primary cost of generation and transmission the basis of reduced electric power rates without leaving any margin for profits. The new rates are to be decided by a committee specially organized.

The First Program The Japan Electric Power Generation and Transmission Company worked out a plan for generating electric power at seventeen sites scattered throughout the country. This

project, aiming at generating 450,000 kilowatts of electricity, was begun in 1939 and is expected to be completed in 1943. Moreover, the electric power companies, which have become members of the Japan Electric Power Generation and Transmission Company, have already started work on the construction of water power plants that will generate about 1,000,000 kilowatts when completed in 1942. In four years, therefore, the output of electric power will be increased by some 1,500,000 kilowatts. The annual increase in the output of electricity has averaged 300,000 kilowatts, but hereafter it will average 400,000 kilowatts every year until 1943, thus meeting the increased demand for electric power due to the expansion of industrial production.

The first program for electric power generation of the Japan Electric Power Generation and Transmission Company calls for the development of water power resources at the following seventeen sites: two sites on the Ishikari River and one on the Tokachi River in Hokkaido; one on the Aga River, three on the Tone River, one on the Oi River

and one on the Kuzuryu River in Central Japan; one on the Ota River, two on the Ezawa River and one on the Takatsu River in Western Japan; and one on the Watahigawa River in Shikoku and one on the Itsuse River in Kyushu.

Shortage of Electric Power In the latter half of 1939 and the early months of 1940, Japan greatly suffered from a shortage of electric power caused by the insufficient supply of coal for thermal generation and the scarcity of rainfall for hydro-electricity. Factories operated by electric power were required to shorten their working hours or to have extra holidays in order to save electric power by 10 to 45 per cent according to different branches of industry, while homes were urged to decrease the number of electric lamps. The factories in the Kansai district, including those in the great industrial city of Osaka, were miserably paralyzed, provoking a question in regard to the responsibility of the calamity to the Japan Electric Power Generation and Transmission Company and its supervising office, the Board of Electricity of the Communications Ministry.

Gas Industry

Introduction

When compared with the electric industry, the gas industry has been very slow in its development. The introduction of gas took place in 1885, when it was used in Yokohama for street lighting purposes. Later in the same

year Tokyo adopted it for the same purpose. The capital invested in 1885 was ¥54,000, and a slow but steady increase took place until 1925, when the invested capital stood at ¥276,373,000. After that year the industry made great strides as the following figures show:

CONDITIONS OF GAS PRODUCING COMPANIES

	Coal Consumed Metric Ton	Output Thousand Cubic Meters	Amount Supplied to Consumers Thousand Cubic Meters	No. of Consumers	No. of Lights & Burners	Byproducts	
						Coke (Unit: Metric Ton)	Coaltar (Unit: 1,000 Liters)
1934	1,461,000	1,046,639	741,787	1,906,409	4,242,215	971,242	75,923
1935	1,522,000	1,219,746	771,534	1,995,000	4,453,919	1,012,443	83,865
1936	1,614,000	858,965	810,095	2,112,000	5,771,537	1,068,968	86,204
1937	1,719,519	940,871	859,424	2,233,000	6,173,970	1,134,220	90,162
1938	2,172,765	1,104,531	976,030	2,333,203	—	1,460,855	112,245
1939	2,423,000	1,204,100	1,112,100	2,357,000	—	1,630,000	122,000

Business Results

End of March	No. of Companies	Paid-up Capital	(In ¥1,000)			
			Fixed Assets	Profit	Percentage of Profit against Fixed Capital	Dividend Rate
1934	102	419,096	584,323	53,029	9.1	7.8%
1935	104	440,210	585,998	60,295	13.6	7.6

End of March	No. of Companies	Paid-up Capital	Fixed Assets	Profit	Percentage	Dividend
					of Profit against Fixed Capital	Rate
1936	106	458,196	591,637	70,302	11.9	7.8
1937	111	460,403	608,919	78,232	12.8	8.4
1938	116	332,100	402,211	54,035	13.4	8.4
1939	122	338,359	—	—	—	—

CONSUMPTION OF GAS BY INDUSTRIES

(Compiled by the Ministry of Commerce and Industry)
(In 1,000 cubic meters)

	1937	1938
Fiber Industry	24,092	27,528
Metal Industry	8,140,967	10,384,371
Machine and Tool Manufacturing	184,811	134,040
Chemical Industry	211,502	377,417
Ceramic Industry	775,434	714,588
Foodstuffs	13,515	14,223
Total including others	9,399,887	11,705,671

Note: Figures include those for gas produced by factories themselves. The number of gas motors in operation was 653 with 42,977 horse power in 1937, 649 with 46,217 horse power in 1938.

Gas Industry in 1939

Because the gas industry is a public enterprise in this country, the Government has adhered to a principle of one gas company for one city or town in the past. Under the circumstances, the gas industry in this country is more monopolistic in nature than all other industries including power. A steady progress of the gas industry has been noted during the past few years, particularly since the outbreak of the China Affair as a source of industrial fuel indispensable for munitions industries. Demand for gas as substitute fuel for heavy oil has gained greatly and is expected to further rise in the future. Toward the end of 1939, there were 118 gas companies in Japan in operation. In addition, four new gas companies are in the process of establishment, of which two are nearly ready to commence business. Gas supply zones extend over 150 cities, inclusive of all major towns and cities in Japan, catering to more than 2,357,000 consumers. The combined capital of gas companies, including those managing the power industry jointly, aggregates

approximately ¥472,000,000 (¥363,000,000 paid-up). The 1939 production of gas totalled 1,204,000,000 cubic meters and the total 1939 supply amounted to 1,112,000,000 cubic meters, thus eclipsing the 1938 production and supply, standing at 1,104,500,000 cubic meters and 976,000,000 cubic meters, respectively, by 9 per cent and 14 per cent. Notwithstanding the various handicaps such as strengthened control over various materials such as coal since the outbreak of the Affair and the gas consumption restriction imposed in the second half of 1939, it is noteworthy that the gas industry has made such noteworthy progress. This may be largely due to the rise of heavy industries. As indicated by Table 1, the consumption of gas in six major cities in 1939 averaged 467 cubic meters per house, while that in other cities averaged 513 cubic meters, showing an appreciable increase over the 1930 consumption of 6 major cities which averaged at 452 cubic meters and that of other cities at 340 cubic meters, the increase in the latter being particularly remarkable. This was attributable to the movement of industrial factories from bigger cities to smaller cities because of governmental restrictions over industrial zones in bigger cities. As a result, the demand for gas has come to be evenly distributed among smaller towns and cities as well as bigger cities. With an average of 15 per cent restriction over general consumption of gas imposed and gas charges pegged despite the advance in prices of coal, however, the gas industry, as an industrial enterprise, has been subjected to a certain heavy blow in regard to profit situation. Nevertheless, the gas industry in 1939 achieved an unexpectedly favorable result chiefly because of a remarkable improvement in its revenues because of the gain in the market prices of its principal by-products such as coke, tar and benzol. The revenue of gas companies from those by-products accounted for nearly 30 per cent of the total revenue. The production of those by-products, has

been on a steady increase every year. Coke production in 1939 amounted to 1,630,000 metric tons, gaining by 169,000 metric tons or 11.5 per cent over the 1938 outputs of 1,461,000 metric tons. Production of coal tar, an important material for organic chemical industry, in 1939 also totalled 122,000 kiloliters, gaining by 10,000 kiloliters or 8.9 per cent over 1938. Compared with the production in 1937, the 1939

production showed a gain of 496,000 metric tons or 43.7 per cent in coke and 32,000 kiloliters or 35.5 per cent in coal tar. Gas industrialists in Osaka and other principal districts have also started collecting benzol on an industrial scale since the outbreak of the Affair. Collection of benzol, an important munitions material, was more or less neglected in the past in this country.

TABLE 1. DISTRIBUTION OF GAS IN JAPAN

Years	Total Supply (1)	Consumers (2)	Average Per-day Consumption (3)	Average Per-house Consumption (4)
1930-A	588.9	1,296.1	1,613	452
B	111.3	326.9	305	340
1931-A	624.4	1,371.7	1,711	455
B	115.6	344.9	311	337
1932-A	597.4	1,436.3	1,637	415
B	115.3	348.9	316	330
1933-A	597.7	1,513.5	1,638	394
B	112.2	352.9	307	318
1934-A	623.7	1,548.2	1,709	402
B	118.1	358.2	324	329
1935-A	648.2	1,626.0	1,776	398
B	123.7	370.0	339	334
1936-A	677.8	1,723.0	1,857	393
B	132.2	388.6	358	340
1937-A	710.9	1,827.1	1,948	389
B	148.5	406.0	407	365
1938-A	828.4	2,028.6	2,269	408
B	147.7	304.6	405	486
1939-A	956.5	2,048.7	2,621	467
B	155.6	308.5	426	513

Note: A for six prefectures including six major cities.
B for other prefectures and cities.

- (1) in 1,000,000 cubic meters.
(2) in 1,000 houses.
(3) in 1,000 cubic meters.
(4) in cubic meters.

TABLE 2. GAS ENTERPRISES BY PREFECTURES (1939)

Prefectures	Gas Companies	Gas Tanks	Gas Supply (in 1,000 cubic meters)	Consuming Houses
Tokyo	3	17	524,402	1,042,577
Kyoto	2	7	44,634	123,407
Osaka	4	17	209,779	482,501
Kanagawa	7	17	42,045	95,627
Hyogo	6	20	68,484	198,261
Nagasaki	1	4	10,378	15,384
Niigata	7	11	11,034	15,348
Saitama	3	4	2,598	5,687
Gumma	3	4	1,664	4,652
Chiba	6	13	5,637	7,057
Ibaraki	2	4	2,013	2,516

Prefectures	Gas Companies	Gas Tanks	Gas Supply (in 1,000 cubic meters)	Consuming Houses
Tochigi	2	4	1,380	4,507
Nara	2	4	1,733	4,582
Miye	3	6	2,943	7,840
Aichi	5	12	67,118	106,332
Shizuoka	5	9	6,505	14,020
Yamanashi	1	4	1,214	4,836
Shiga	3	3	1,011	4,185
Gifu	2	4	2,656	4,746
Nagano	4	7	2,443	6,679
Miyagi	2	3	2,874	4,724
Fukushima	2	3	1,680	3,166
Iwate	1	1	257	722
Yamagata	2	4	685	1,525
Akita	2	2	117	2,578
Fukui	2	3	2,458	7,735
Ishikawa	2	4	3,459	11,091
Toyama	2	3	1,863	4,791
Tottori	2	2	1,614	2,459
Shimane	1	1	658	2,190
Okayama	4	6	6,617	23,201
Hiroshima	2	10	20,787	28,529
Yamaguchi	3	5	3,939	7,694
Wakayama	2	3	1,971	5,699
Tokushima	1	2	1,217	3,971
Kagawa	2	4	1,026	3,268
Ehime	3	5	3,374	5,245
Aichi	1	1	1,324	4,077
Fukuoka	4	14	32,413	43,133
Kumamoto	1	2	3,043	6,038
Oita	1	3	2,226	2,095
Saga	2	2	944	2,067
Miyazaki	3	2	1,684	4,368
Kagoshima	1	3	2,035	4,868
Hokkaido	4	11	9,648	21,366
Total	123	266	1,122,090	2,357,158

Note: Including four companies not operating as yet.

TABLE 3. GAS PRODUCTION BY KIND
(In million cubic meters)

	1938	1939	Increase
Coal gas	1,008.6	1,137.9	49.3
Liquid gas	6.0	24.0	18.0
Mixed gas	4.6	34.3	29.7
Natural gas	5.3	7.2	1.9
Generator gas	—	0.7	0.7
Total	1,104.4	1,204.1	99.7

Waterworks

Waterworks in Japan were for the first time established in Osaka under the Waterworks Law of 1895 and thereafter developed remarkably all over the country. The Law was revised in 1911

to give sanction for the construction of waterworks to private associations as public bodies. By March 1938 places which already obtained permission to construct waterworks were as follows:

Established by Cities	No. of Waterworks Sanctioned	No. of Waterworks in Operation	Established by Prefecture	No. of Waterworks Sanctioned	No. of Waterworks in Operation
Towns and Villages	120	117	Private persons	4	4
Town or Village Associations	405	368	Total	115	108
	8	7		652	604

NUMBER OF WATERWORKS IN OPERATION BY DISTRICTS

(March 1938)

Prefecture	Established by Cities	Established by Towns or Villages	Established by Towns & Village Unions	Established by Prefecture	Established by Private Persons	Total
Hokkaido	5	20	—	—	4	29
Aomori	2	1	—	—	1	4
Iwaté	1	6	—	—	7	14
Miyagi	2	17	—	—	3	22
Akita	1	—	—	—	—	1
Yamagata	4	14	—	—	—	18
Fukushima	4	9	—	—	—	13
Ibaraki	1	1	—	—	3	5
Tochigi	2	4	—	—	—	6
Gumma	3	1	—	—	—	4
Saitama	—	5	1	—	—	6
Chiba	—	2	—	1	5	8
Tokyo	2	5	—	—	4	11
Kanagawa	3	10	1	1	1	16
Nilgata	4	10	—	—	—	14
Toyama	2	3	—	—	—	5
Ishikawa	1	4	—	—	—	5
Fukui	1	2	—	—	—	3
Yamanashi	1	9	1	—	2	13
Nagano	5	27	1	—	—	33
Gifu	2	15	—	—	3	20
Shizuoka	4	19	—	—	1	24
Aichi	6	1	—	—	2	9
Mié	3	4	—	—	—	7
Shiga	1	—	—	—	—	1
Kyoto	2	24	—	—	—	26
Osaka	4	16	—	—	4	24
Hyogo	5	13	—	—	7	25
Nara	1	6	—	—	2	9
Wakayama	2	4	—	—	8	14
Tottori	2	8	—	—	1	11
Shimané	1	7	—	—	7	15
Okayama	3	12	1	1	—	17
Hiroshima	5	6	—	—	14	25
Yamaguchi	4	6	—	1	9	20
Tokushima	1	3	—	—	—	4
Kagawa	2	3	1	—	6	12
Ehimé	3	20	—	—	1	24
Kochi	1	7	—	—	3	11
Fukuoka	10	6	—	—	1	17
Saga	2	4	—	—	—	6
Nagasaki	2	10	—	—	5	17
Kumamoto	1	7	—	—	—	8
Oita	3	4	—	—	1	8

Prefecture	Established by Cities	Established by Towns or Villages	Established by Towns & Village Unions	Established by Prefecture	Established by Private Persons	Total
Miyazaki	1	4	—	—	1	6
Kagoshima	1	8	1	—	2	12
Okinawa	1	—	—	—	—	1
Total	117	367	6	4	108	603

NUMBER OF HOUSEHOLDS SUPPLIED

Prefecture	Number of Households Supplied	Number of Households Supplied per 100 Households	Prefecture	Number of Households Supplied	Number of Households Supplied per 100 Households
Hokkaido	98,784	18.11	Osaka	632,961	70.50
Aomori	21,675	13.39	Hyogo	251,883	41.23
Iwaté	9,313	5.32	Nara	10,705	8.64
Miyagi	37,692	18.82	Wakayama	24,787	13.42
Akita	9,382	5.35	Tottori	13,656	14.36
Yamagata	19,045	10.30	Shimané	15,708	9.97
Fukushima	29,884	10.96	Okayama	46,867	16.63
Ibaraki	8,223	2.86	Hiroshima	111,290	29.11
Tochigi	14,466	6.79	Yamaguchi	39,615	15.29
Gumma	22,391	9.94	Tokushima	16,121	11.05
Chiba	7,306	2.49	Kagawa	15,861	10.42
Tokyo	933,528	72.78	Ehimé	14,758	6.07
Kanagawa	214,101	59.76	Kochi	14,458	9.25
Nilgata	45,068	12.67	Fukuoka	140,131	26.27
Toyama	6,661	4.30	Saga	10,857	8.50
Ishikawa	16,731	10.58	Nagasaki	68,550	27.09
Fukui	20,402	15.28	Kumamoto	22,760	8.70
Yamanashi	23,683	19.08	Oita	20,005	10.24
Nagano	47,419	14.25	Miyazaki	6,566	4.14
Gifu	17,404	7.12	Kagoshima	23,787	7.15
Shizuoka	35,199	10.11	Okinawa	3,576	2.83
Aichi	207,783	36.47	Total	3,549,831	26.30
Mié	18,731	7.81			
Shiga	5,730	3.79			
Kyoto	165,539	46.82			

Note: Percentage is taken on the number of households in prefectures on October 1, 1935.

NUMBER OF HYDRANTS AND VOLUME OF WATER SUPPLIED

Year	No. of Waterworks	Private	Hydrants without Meters		Hydrants with Meters	Fire-hydrants
			Common	Public on Streets		
1934	546	424,118	41,490	2,055	2,172,284	123,299
1935	553	459,142	34,142	2,041	2,194,401	130,869
1936	600	458,846	32,558	2,468	2,391,338	136,328
1937	631	495,329	31,835	2,813	2,514,355	123,337

PUBLIC UTILITIES

	District Water Meters	Total	Volume of Water Supplied (1,000 cubic m.)
1934	3,092	2,766,338	936,287
1935	3,002	2,823,957	1,003,549
1936	2,642	3,024,180	1,068,947
1937	2,460	3,170,129	1,216,393

CHAPTER XXI

CHEMICAL INDUSTRY

TEIKOKU SANSO

KABUSHIKI KAISHA

HEAD OFFICE:

38, Akashi-machi, Kobe-ku,

K O B E

CAPITAL: Yen 3,300,0000

OXYGEN - ACETYLENE - ARGON

ELECTRIC WELDING

CHAPTER XXI

CHEMICAL INDUSTRY

Paper

Historical and General

Paper-making in Japan remained a handicraft for over twelve centuries after a Korean priest, Doncho, introduced the technique in 610 A.D. (Some writers maintain that paper existed in this country prior to that date.) During this long period of time, various grades of paper were produced from fibers of certain shrubs such as "kozo," "mitsumata," "gampi," etc.

Foreign-style paper was made for the first time in the 7th year of Meiji, 1874, in a small mill, the Yukosha, Tokyo, through the assistance of an English engineer. Several more mills were established the following year, but the development of the industry was naturally slow on account of the small demand. In the beginning, the raw materials used for foreign-style paper were chiefly rags, but in 1889, wood pulp was used for the first time in a mill which belonged to the Oji Paper Mills, Ltd. At first, the smallness of quantity required and competition from abroad made the industry struggle severely, but as with all other industries, the wars with China in 1894-95 and with Russia in 1904-5 gave it a great chance of development. In 1910, the Tomakomai Mill of the Oji Paper Mills, Ltd., which had been under construction since 1906 began operation. With the establishment of the Tomakomai Mill Japan became selfsupplying with respect to newsprint. Again, the Oji Paper Mills, Ltd., took the initiative in establishing a pulp mill, in 1912, in Odomari, Saghalien Island, but was quickly followed by the Fuji Paper Mills, Ltd., and the Karafuto Industrial Co., Ltd. The industry was just getting well settled when the Great War broke out and prosperity was forced

upon it. Importations of foreign-style paper was practically stopped. Demand at home advanced, exports increased and the industry expanded at a great speed. The production of foreign-style paper in 1881 was only 3,968,000 lbs., it increased to 327,614,000 lbs. in 1914, 519,141,000 lbs. in 1919, 317,383,000 lbs. in 1924, and 1,418,187,000 lbs. in 1929.

In 1932 the Oji Paper Mills, Fuji Paper Mills and Karafuto Industrial Company were merged into one firm under the name of the Oji Seishi Kabushiki Kaisha (Oji Paper Manufacturing Company, Ltd.). It has a subscribed capital of ¥300,000,000, and is virtually monopolistic having control over 80% of the total paper production in the country and producing about 85% of the total foreign-style paper. The real strength of the Oji Paper Manufacturing Co., Ltd. lies in its almost complete monopoly of pulp production. In 1939 it turned out 1,621,200,000 lbs. of paper and 528,586,000 lbs. of pulp, which was equivalent to 80 per cent of domestic production.

Paper Industry in 1940

The economic control since 1937 was aimed at the expansion of the heavy industries at the sacrifice of various peacetime industries. But the paper manufacturing industry in Japan is one of the best organized and voluntarily controlled enterprises in the country and it has been able to cope with the emergency period with the minimum amount of sacrifice on its part. The conditions of paper industry and trade in 1940, were steady, and the profits earned by companies increased inspite of further strengthening of State control on the manufacture and consumption of high grade papers in the year. (See Chapter X.)

Supply and Demand According to the report of the Japan Paper Manufacturers' Association the production of paper during 1940 by 9 member com-

1 Paper mulberry. 2 Golden flowered Edgeworthia (Edgeworthia chrysantha). 3 An indigenous plant (Wikstroemia sikokiana).

panies reached 1,961,238,000 lbs., the quantity sold being 1,935,674,000 lbs., a decrease of 56,432,000 lbs. or 2.7 per cent in the former and 100,226,000 lbs. or 4.9 per cent in the latter as compared with the previous year. But the pro-

duction and sale of printing papers for the publication of books increased, while those of papers for daily press decreased as given in the following table:

PRODUCTION AND SALE OF FOREIGN STYLE PAPERS IN THE PAST FIVE YEARS

(9 member companies of the Japan Paper Manufacturers' Association)

(Unit: 1,000 lbs.)

Year	Printing Paper		Paper for Daily Press		Others		Total	
	Production	Sale	Production	Sale	Production	Sale	Production	Sale
1936	544,194	570,080	768,142	766,534	513,510	536,025	1,825,848	1,872,640
1937	655,573	616,599	825,189	811,291	648,264	604,983	2,129,026	2,032,873
1938	400,799	483,388	857,463	852,896	690,193	694,123	1,948,455	2,030,407
1939	384,839	391,819	873,218	869,757	759,614	774,324	2,017,670	2,035,900
1940	445,437	432,035	815,264	807,003	700,537	696,646	1,961,238	1,935,674

Decrease of Imports The imports of paper in 1939 amounted only to 2,730,000 lbs., a remarkable decrease of 81 per cent as compared with the previous year. The main reason is to be found in the strict trade control by the Government over the peace time goods,

especially in the case of imports. **Increase of Exports** But the exports of paper in 1939 amounted to 418,588,000 lbs., an increase of 27.6 per cent over the previous year. Of the total amount, 371,292,000 lbs. or 88 per cent went to the yen bloc areas.

PRODUCTION OF PAPER SINCE 1930

(Factory Statistics by the Ministry of Commerce and Industry)

(Quantity in 1,000 kg. and value in ¥1,000)

Year	Printing Paper		Copying Paper		Drawing Paper		Wrapping Paper	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1934	379,062	84,167	11,684	4,216	3,402	1,980	39,180	10,327
1935	408,671	90,263	17,854	5,480	6,678	2,126	49,049	11,028
1936	434,743	94,795	19,850	5,770	5,103	1,563	57,079	14,862
1937	519,898	119,355	27,788	8,723	5,511	2,071	70,706	21,234
1938	495,504	121,371	19,229	9,435	2,986	2,069	57,577	21,550

Year	Match Paper		Cigarette Paper		Art Paper		"Hanshi"	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1934	2,787	711	5,658	4,410	15,091	5,655	2,838	6,924
1935	6,815	1,825	10,285	7,480	11,268	3,976	1,953	6,690
1936	5,170	1,405	14,165	9,659	12,537	4,081	3,558	6,080
1937	3,455	1,011	14,281	11,547	14,061	5,381	2,154	9,797
1938	5,808	1,975	16,650	13,978	11,696	5,137	5,000	13,263

Year	"Minogami"		"Torinoko" and Imitation Paper		Board		Others and Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
1934	305	1,010	4,174	198,502	20,079	200,923	224,780	
1935	339	1,755	6,438	256,336	27,004	250,983	335,646	
1936	358	1,410	6,952	265,238	27,973	337,492	38,503	
1937	323	1,720	9,853	337,492	38,503	335,646	364,048	
1938	758	4,030	9,767	247,558	33,688	200,923	224,780	

CONSUMPTION OF FOREIGN-STYLE PAPER

(Statistics of the Japan Paper Manufacturers' Association)

(Quantity in 1,000 lbs.)

Year	Production	Imports	Exports	Consumption	
				Consumption	Consumption per Capita
1934	1,591,474	138,556	101,523	1,643,542	22.6
1935	1,719,637	167,482	112,899	1,764,976	26.8
1936	1,825,848	193,664	126,559	1,889,641	25.6
1937	2,129,026	135,092	135,653	2,041,665	29.0
1938	1,948,455	14,358	146,101	1,859,566	25.4
1939	2,017,670	2,723	230,454	1,774,168	24.3
1940	1,961,238	—	—	—	—

Note: The figures for consumption are made out by deducting stocks at year end.

PRODUCTION OF CELLOPHANE

Year	Production		Year	Production	
	Qty in kg.	Value in yen		Qty in kg.	Value in yen
1931	64,575	176,170	1935	2,382,433	3,940,716
1932	147,000	473,634	1936	3,458,535	6,118,818
1933	574,029	2,008,057	1937	2,395,974	9,645,146
1934	726,842	3,414,839	1938	2,215,865	7,746,403

Note: The value is included in the total of the above table.

IMPORTS OF PAPER BY KIND

Kind	Quantity			Value		
	(Unit: 1,000 pounds)			(Unit: ¥1,000)		
	1937	1938	1939	1937	1938	1939
Printing paper	94,777	7,369	35	9,171	718	8
Imitation parchment, etc.	15,282	1,965	930	3,540	510	182
Packing paper & match paper	19,371	3,851	652	2,609	383	93
Imitation Japanese paper and tissue paper	1,757	445	114	994	350	213
Total including others	135,092	14,358	2,730	18,800	2,886	872

EXPORTS OF PAPER

Kind	Quantity			Value		
	(Unit: 1,000 pounds)			(Unit: ¥1,000)		
	1937	1938	1939	1937	1938	1939
Printing paper	81,449	89,582	149,818	10,402	12,942	23,748
Paste-board	66,131	95,384	95,469	4,485	6,837	8,370
Cigarette paper	9,565	13,755	11,129	4,440	5,701	4,734
Imitation paper	30,036	21,126	29,619	4,447	4,092	5,625
Paper for photograph	27,392	39,263	48,611	2,054	3,952	8,237
Packing paper	10,973	16,730	31,094	2,101	3,623	7,836
Hanshi and Mino	3,990	4,778	5,679	1,555	2,898	3,897
Toilet paper	9,818	11,015	18,262	1,723	2,331	4,162
Gampi and usuyo	2,111	2,091	4,190	2,003	1,996	3,160
Yoshino and Tengujo	595	389	467	978	927	957
Total including others	268,387	327,868	418,588	38,708	52,127	77,946

By Countries

To	Quantity (Unit: 1,000 pounds)			Value (Unit: ¥1,000)		
	1937	1938	1939	1937	1938	1939
Kwantung L. T.	111,894	133,977	141,510	13,814	19,393	26,024
China	40,268	97,326	152,505	6,940	16,149	27,063
Manchoukuo	35,061	49,476	77,277	5,931	8,857	10,128
U.S.A.	2,231	1,122	1,210	1,773	1,497	1,797
British India	26,459	23,649	20,587	1,613	1,123	1,333
Dutch East Indies	11,108	4,055	7,377	1,830	808	1,241
Australia	7,634	4,112	5,480	1,176	787	801
Hongkong	16,075	6,473	5,109	1,777	718	535
Thailand (Siam)	7,853	4,141	5,415	921	572	547
Great Britain	547	376	287	802	541	454
Germany	354	399	232	372	529	294
Philippines	3,310	2,616	1,424	404	328	208
Straits Settlements	4,163	720	935	564	101	125
Total including others	268,387	327,868	418,588	38,708	52,127	77,946

PRODUCTION OF PULP

(Forest Bureau, Ministry of Agriculture and Forestry)

(In tons)

Year	In Japan			Year	In Man-choukuo		
	In Japan	In Man-choukuo	Total		In Japan	In Man-choukuo	Total
1934	708,996	13,737	722,733	1937	886,978	15,011	901,989
1935	757,477	13,718	771,195	1938	955,229	37,672	992,901
1936	802,565	13,171	815,736	1939	1,053,619	60,300	1,113,919

IMPORTS OF PULP

Country of Origin	Quantity (in ton)				Value (in ¥1,000)			
	1936	1937	1938	1939	1936	1937	1938	1939
U.S.A.	153,735	188,115	51,511	49,319	31,758	49,181	15,111	18,767
Canada	27,748	51,929	16,787	9,209	4,150	12,619	5,046	2,034
Sweden	56,228	121,681	24,849	14,064	9,735	26,993	6,276	4,191
Norway	55,778	62,146	18,145	26,731	14,621	17,071	5,400	9,387
Others	32,979	42,737	29,616	68,128	6,842	10,855	9,227	22,159
Total	326,467	466,608	140,908	167,451	67,107	116,720	41,059	56,537

SUPPLY AND DEMAND OF PULP FOR PAPER

(Forest Bureau, Ministry of Agriculture and Forestry)

(Unit in ton)

Year	Production			Year	Consumption		
	Production	Imports	Consumption		Production	Imports	Consumption
1932	547,520	64,208	676,256	1936	747,355	157,358	900,576
1933	614,139	107,774	738,458	1937	829,684	176,131	1,003,215
1934	691,836	140,261	786,399	1938	851,876	29,705	882,000
1935	724,042	143,534	843,945	1939	896,548	26,733	823,115

Fertilizers

The problem of food in Japan is a serious one. The Japanese population is increasing yearly by about a million, but the amount of food produced in the country is not enough to feed them.

Besides, the arable land in the country is so small and limited that hardly any space is left to effect any further increase, and the only method left, beyond extending abroad, is to increase the

yield of crops through intensive farming. And, since January 1940, the Government is encouraging the producers of important chemical fertilizers by giving subsidies so that they may produce at least 80 per cent of demand in 1940-41.

General Condition of the Industry

Chemical Fertilizers. Of all the chemical fertilizers, superphosphate of lime and sulphate of ammonia are the two representative ones, and because of the largeness of their demand and supply the market trend of these two is practically the market trend of the rest.

Superphosphate of Lime The principal raw material for the manufacture of superphosphate of lime is phosphate rock. During 1930 some 570,000 tons were imported, while some 63,385 tons were produced at home, and during 1937 and 1938 imports were 922,317 and 564,175 tons respectively. This rock is imported from the U.S.A., Egypt, and the South Sea Islands.

Superphosphate production has been gaining steadily, 1939 production reaching 1,460,396 metric tons valued at ¥74,561,922, record high in value. Production during the past few years is reported by the Ministry of Agriculture and Forestry as follows:

PRODUCTION OF SUPER-PHOSPHATES

(In metric ton)

1930	957,159
1931	862,401

1932	1,041,497
1933	1,116,573
1934	1,126,149
1935	1,331,616
1936	1,437,196
1937	1,582,985
1938	1,234,000
1939	1,460,396

Supply and demand of superphosphate in recent years follow:

Year	Production (1,00 tons)	Exports and Re-exports		Consumption in Japan Proper
		Exports	Re-exports	
1930	957	35		922
1931	862	32		808
1932	1,041	61		960
1933	1,116	106		1,009
1934	1,126	121		1,004
1935	1,331	151		1,150
1936	1,437	168		1,242
1937	1,582	170		1,379
1938	1,234	197		1,036
1939	1,460	191		1,276

Sulphate of Ammonia The demand for sulphate of ammonia has steadily increased for years. Consumption in 1930 was 488,000 tons, in 1936 it showed a remarkable increase to 1,050,388 tons. The decrease in imports was made good by the increase in domestic production, which in 1938 passed the 1,000,000 ton mark. Japan, in this manner, has become self-supporting in sulphate of ammonia.

Supply and demand of ammonium sulphate in Japan in recent years follow:

Year	Production	Imports	Imports from Territories		Exports to Territories		Consumption in Japan Proper
			(In metric ton)	Exports	Imports	Exports	
1935	611,751	238,598	71,551	5,992	103,294	812,614	
1936	880,262	314,131	56,436	18,417	182,024	1,050,388	
1937	931,821	224,208	17,315	7,512	180,840	934,995	
1938	1,463,875	295,823	76,504	24	262,398	1,573,780	
1939	1,392,814	82,339	129,355	30	197,429	1,407,049	

Lime Nitrogen While lime nitrogen was a fertilizer difficult to make farmers use it, they now recognize the merit of this nitrogenous fertilizer, and owing perhaps to its reasonableness in price, its consumption increased with a great stride. In 1931 its consumption was 168,448 tons and in 1938 it increased

to 286,583 tons. Production increased rapidly too. While in 1924, it barely amounted to about 121,000 tons, it increased up to 290,398 tons in 1936, more than two times as large. 1939 production was 215,270 tons valued at ¥17,341,340.

SUPPLY AND DEMAND OF LIME
NITROGEN

(In metric ton)

Year	Quantity	Consumption
1934	197,252	169,071
1935	260,632	223,171
1936	290,398	240,119
1937	323,508	286,251
1938	306,846	286,583
1939	215,270	215,270

Vegetable Fertilizers Vegetable fertilizers are many in kind. Bean cake, rape-seed cake, cotton-seed cake, rice bran, etc., come into this class of fertilizers, bean cake being the most im-

portant.

Bean Cake The domestic production of bean cake is very small when compared with the quantity imported, the greater part of which comes from Manchoukuo. In 1916 the consumption of bean cake was 807,975 tons, which, by 1926, increased to 1,510,088 tons, but since then no increase can be noted as the development of the synthetic nitrogen industry has cut deeply into the development of vegetable fertilizer industry.

Supply and demand of bean cake for 1935-1939 were:

SUPPLY AND DEMAND OF BEAN CAKE

(In metric ton)

Year	Production	Imports from		Exports to		Consumption in Japan Proper
		Imports	Territories	Exports	Territories	
1935	226,876	431,978	87,051	2,431	368	714,373
1936	248,733	376,783	121,931	2,384	848	722,165
1937	261,738	394,815	41,262	3,747	584	693,484
1938	327,716	623,054	27,152	2,428	432	975,062
1939	364,586	849,202	32,083	2,530	62	1,243,279

Fish and Animal Fertilizers In Japan fish is indispensable as food, but at the same time they are caught for oil extraction and the refuse is converted into manure. (See Chapter XV.)

In addition to chemical, vegetable and animal fertilizers, a great quantity of self-supplied fertilizers are supplied and consumed, the figures for which are

given also in statistics attached at the end of this subject.

Statistics

According to the report of the Ministry of Agriculture and Forestry the value of production and consumption of various kinds of fertilizers were as follows:

VALUE OF FERTILIZERS PRODUCED IN JAPAN PROPER

(Fertilizers which require a licence for production)

(Unit ¥1,000)

Year	Animal	Vegetable	Chemical	Mixed	Miscellaneous	Total
1935	27,612	36,395	150,988	53,528	100	268,625
1936	34,738	41,271	179,178	57,802	113	313,105
1937	38,687	53,676	221,177	70,631	830	385,003
1938	34,525	63,729	239,261	105,895	1,112	444,522
1939	60,685	95,015	210,830	113,558	2,350	482,438

CONSUMPTION OF FERTILIZERS IN JAPAN PROPER

(Unit: ¥1,000)

Year	Fertilizers Sold on the Market				Total	Self-supplied Fertilizers	Grand Total
	Manufactured under Licence	Manuf'd without Licence	Balance of Exports & Imports	Raw Materials for mfg. Fertilizers			
1935	263,625	22,000	71,014	84,938	276,701	328,560	605,261
1936	313,105	27,000	76,434	91,594	324,945	354,200	679,145
1937	385,003	33,000	70,314	117,524	370,794	387,740	758,534
1938	444,522	48,000	81,847	142,590	431,770	441,530	873,309

PERSONS ENGAGED IN THE FERTILIZER BUSINESS

Year	Manu- fac- turers	Im- porters	Importers of Fertilizers from	
			Traders	Colonies
1930	23,564	1,105	432	45,098
1931	23,334	1,072	428	43,913
1932	23,218	1,052	434	42,131
1933	23,083	1,035	453	41,614
1934	23,529	1,004	451	40,856
1935	23,683	995	470	40,563
1936	23,788	991	456	40,548
1937	23,890	968	455	39,816
1938	23,844	952	451	39,257
1939	23,854	—	—	—

State Control in 1939-1940 An extreme stringency of supply has prevailed in fertilizer circles in Japan in recent years. Chemical fertilizers such as ammonium sulphate, nitrogen of lime, superphosphate of lime and the potassic manures have become particularly short as the China Affair has progressed.

Last year was extremely difficult for chemical fertilizers in this country; the demand increased because of the deficient supply of labor in agricultural communities and different agricultural production expansion schemes. On the other hand, little increase was noted in production because of the restricted supply of power and coal, the aggravating profit situation of fertilizer concerns and the paucity of raw materials. Thus, supply and demand relations have got out of balance and an acute shortage of fertilizers has ensued. Since the outbreak of the European War the fertilizer trade of Japan has been greatly hit for, while almost completely self-sufficient in nitrogenous fertilizer because of supplies from the yen bloc, it had depended largely on imports from

foreign sources for its supply of potassic fertilizers. Following the outbreak of the European War, imports from Germany and France, which supplied about 70-80 per cent of Japan's imports of potassic fertilizers, were immediately suspended. In 1939, however, the effect was not so acute, as speculative imports had been made before the outbreak of the hostilities. In 1940, however, the situation has become strained, and the Ministry of Agriculture and Forestry has had to restrict their consumption. As was the case with potassic fertilizers, phosphorite supplies have also been affected by the European War. Japan has depended on imports for more than 70 per cent of her supplies, Egypt having accounted for about 20 per cent of these. During the European War, however, Japan can expect little phosphorite from foreign sources though the war influence is apparently not so acutely felt as on potassic fertilizers. The official prices of ammonium sulphate and nitrogen of lime for 1939 were left intact because of the low-price policy of the Government. That of superphosphate of lime was fixed for the first time in January 1939, the establishment having been delayed because of the technical difficulty caused by the import restriction imposed on phosphorite. Manufacturers asked the Government to raise the official price of ammonium sulphate, which had been in operation three years, in January and August 1939, but the Government refused. The same was the case with nitrogen of lime. The rising cost of production, however, served to aggravate the profit situation of fertilizer companies and naturally production dwindled. The reduced supply of chemical fertilizers served to stimulate the demand for organic fertilizers

unrestricted in price such as soya bean cake and oil cake and to sharply advance their prices, giving much impetus to illegal dealings. Relative figures follow:

MARKET PRICES OF MAJOR FERTILIZERS IN 1940

(In yen)

Month	(a) Ammonium Sulphate	(b) Nitrogen of Lime	(c) Superphosphate of Lime
January	3.82	1.91	2.38
February	3.82	1.91	2.38
March	3.82	1.91	2.38
April	3.82	1.91	2.38
May	3.82	1.91	2.38
June	3.82	1.91	2.38
July	3.82	1.91	2.38
August	3.82	1.91	2.38
September	3.82	1.91	2.38
October	3.82	1.91	2.38
November	3.82	1.91	2.38
December	3.82	1.91	2.38
Year average	3.82	1.91	2.38

Note: (a) per 10 kwan; (b) per 22.5 kgs; (c) per 7.5 kwan.

Governmental control over fertilizers since the outbreak of the China Affair has been exercised in various forms. Of those measures taken in 1939, the prefectural distribution quota system is certainly the most noteworthy. Under this, the Government started, as from August 1, 1939, a distribution quota for ammonium sulphate, nitrogen of lime, superphosphate of lime and potassium salt with the object of controlling the supply on a well-planned basis and rationalizing the distribution in order to stabilize the production of foodstuffs. First prefectural governments receive reports on the estimated consumption of the respective fertilizers from cities, towns and villages and make out a combined demand. The total demand of each prefecture is then reported to the Ministry of Agriculture and Forestry, on the basis of which, in turn, the ministry fixes the volume of allotment

to the different prefectures. By this system, the State restricts the supply volume of fertilizers. The allotted volume is passed to the prefectures, then to towns and villages and from there to different executive associations, from which the distribution is made to farmers. The fertilizer companies sell to distribution companies, who then deliver through two major distribution systems, namely, the industrial association system (All-Japan Cooperative Association, Sales and Purchasing Association, town and village industrial associations, executive associations and farm houses), and the trade association system (Japan Wholesalers' Association, wholesalers' trade associations, fertilizer retailers, executive associations and farm houses) by instructions of the Ministry of Agriculture and Forestry. But the system did not work well and the Ministry of Commerce and Industry decided to create a distribution control company. Bills concerning its establishment were submitted to the 75th session of the Imperial Diet, and the Japan Fertilizer Company Administration Law was promulgated on April 8, 1940. The proposed Japan Fertilizer Company is to be capitalized at ¥50,000,000 (to be subscribed equally by the Government and private industrialists), and to attend to the sale control of inorganic fertilizers.

The State compensation system for fertilizer production also starts from 1940. The official prices of fertilizers, which were not increased last year, will not be raised during the first seven months of 1940 in accordance with the low-price policy of the Government. Instead, the Government has decided to grant a loss compensation to fertilizer manufacturers at the rate of ¥17.06 per ton for ammonium sulphate, ¥4.40 for superphosphate of lime and ¥8.06 for nitrogen of lime. In addition to which the Government is expected to subsidize the supply of power. Thus, the Government's appropriations for subsidizing the fertilizer industry during 1940 total ¥50,000,000.

Caustic Soda, Soda Ash, Bleaching Powder

Soda Ash Soda ash occurs in its natural state in some parts of the world, but in this country it has to be prepared from salt, and as salt is a Government monopoly the price is high,

so when the Asahi Glass Company, in order to attain self-sufficiency, started the production of soda ash after the World War it did so on uneconomic basis, but the Government came along

and by granting liberal subsidies to this and other concerns saved the industry and put it on a paying basis. Brunner, Mond and Company (British) and H. Ahrens and Company (German), who used to be the largest importers, were hit hard by this development in home production. The history of the growth of the soda ash industry in Japan is the history of strife between the Asahi Glass Company, backed by the Mitsubishi interests and protected by the Government, and these foreign concerns.

Caustic Soda In the past the commercial production of caustic soda was

only possible if a good price was obtained for bleaching powder. The industry, therefore, was greatly dependent on this latter commodity for quantity production. As soda ash is now being produced cheaply, caustic soda is being manufactured from it so domestic production is increasing.

Bleaching Powder The demand for bleaching powder has become active since an improvement was registered by the paper manufacturing companies. The business solely depends on the rise and fall of the foreign-style paper manufacturing industry.

PRODUCTION AND IMPORTS OF SODA ASH

	Production		Imports		
	(In metric ton)		(In metric ton)		
1934	170,622	37,139	1937	377,000	46,276
1935	364,613	38,308	1938	331,307	21,584
1936	367,205	40,895	1939	294,931	19,232

PRODUCTION, IMPORTS AND EXPORTS OF CAUSTIC SODA

	Production	Exports	Imports	Supply
	(In metric ton)			
1935	233,288	17,495	19,936	235,729
1936	284,999	23,911	11,587	272,677
1937	362,141	3,676	27,429	384,005
1938	440,316	11,015	266	428,967
1939	423,182	24,283	0	398,899

Note: As to the value see the table given at the end of this chapter.

PRODUCTION AND EXPORTS OF BLEACHING POWDER

	Production			Exports			Supply		
	(In metric tons)			(In metric tons)			(In metric tons)		
1934	66,155	4,247	61,908	1937	91,283	6,990	84,293		
1935	77,080	6,489	70,591	1938	77,286	2,950	74,336		
1936	79,228	8,505	70,723	1939	83,258	6,479	76,779		

Soap Making

Development and Production

The industry was started early in the Meiji Era, but no great progress was made until after the Russo-Japanese War of 1904-1905, when machinery was introduced from abroad. During the World War, the industry enjoyed great prosperity, but the reaction was also very severe when it came in 1920. However, during those difficult times, the foundation of the industry became more

consolidated and the quality of soap improved a great deal.

Production of soap in Japan is as per the accompanying table. Tokyo and Osaka are the two principal places of production, the former producing about 50% of the total production in the country, while Osaka produces about 30%. Exports of soap amounted to ¥17,413,000 in 1939, against ¥7,837,000 of the previous year.

PRODUCTION OF SOAP BY KIND

(In ¥1,000)

Year	Toilet	Industrial	Medical	Laundry	Powdered	Others	Total
1934	21,407	1,932	477	13,756	3,331	2,037	42,843
1935	23,326	3,295	477	15,537	4,127	3,491	50,258
1936	23,249	3,742	306	18,223	3,470	2,915	51,908
1937	27,229	4,527	338	18,410	3,987	594	55,087
1938	29,717	4,524	619	29,355	5,800	2,179	72,196

Vegetable and Animal Oils and Tallow

Introduction

For lighting purposes vegetable oils have been used in Japan for centuries. In earlier days perilla oil was used but this was later replaced by rapeseed oil. The production of these oils on an industrial basis only developed after the Russo-Japanese War of 1904-1905.

Production of hardened oil in Japan during 1938 amounted to 108,088 metric tons in contrast to 97,132 metric tons in 1937. It is used mostly for soap making, candles and dietary purposes. Even during the time that Japan was on gold, hardened oil was exported, so after the gold embargo was imposed exports increased.

The principal vegetable oils produced are soya bean and rapeseed oils. Linseed oil, perilla oil, hempseed oil, wood oil, sesame oil, cotton-seed oil, castor oil, groundnut oil, copra oil, camellia oil, etc., are also produced in considerable quantities. The production of soya bean oil in 1938 was 65,710 metric tons and rapeseed oil was 23,674 metric tons.

Of the principal vegetable oils produced in Japan, only wood and camellia oils and vegetable wax are pressed from domestically grown seeds, all the others are pressed from materials from abroad, the amount of imports in 1939 reaching ¥31,982,000.

Statistics Statistics for the vegetable and animal oil industry follows:

PRODUCTION OF VEGETABLE OILS

(Compiled by the Ministry of Commerce and Industry)

(In yen)

Year	Rapeseed Oil	Sesameseed Oil	Groundnut Oil	Cottonseed Oil	Copra Oil	Soya Bean Oil
1934	13,676,703	2,610,393	487,009	3,169,850	2,648,436	14,054,936
1935	20,019,129	2,835,750	595,030	7,129,750	5,376,497	15,329,198
1936	22,722,629	4,093,982	383,134	1,304,904	5,658,785	18,986,848
1937	15,187,205	4,282,440	795,892	11,203,765	6,605,668	21,406,556
1938	14,430,848	3,662,453	3,845,874	4,131,408	8,999,893	22,297,902

(In yen)

Year	Linseed Oil	Perilla Oil	Paulownia Oil	Camellia Oil	Other Oils	Total
1934	3,903,933	4,998,884	250,286	402,232	3,402,745	49,605,407
1935	3,691,897	10,494,970	227,418	439,392	6,743,334	72,882,365
1936	3,874,551	17,929,318	344,452	470,853	9,432,094	91,201,550
1937	2,257,634	10,851,487	362,480	532,615	21,782,918	95,268,660
1938	1,968,843	6,655,260	526,778	502,743	10,612,821	77,634,823

PRODUCTION OF ANIMAL OILS AND TALLOW

(In yen)

Year	Cod Oil	Herring Oil	Sardine Oil	Whale Oil	Other Fish Oils
1934	300,741	23,547	602,816	672,638	980,416
1935	1,158,270	19,770	829,438	989,018	5,257,055
1936	2,366,108	16,506	6,056,412	1,617,192	4,669,603
1937	1,714,517	41,720	3,549,421	1,956,365	12,792,003
1938	1,627,459	14,814	4,294,824	2,111,815	7,865,834

(In yen)

Year	Puna Oil	Beef Tallow	Pork Tallow	Other Animal Tallow	Total
1934	110,803	630,051	287,470	791,678	4,400,160
1935	200,569	2,696,112	378,103	889,938	12,418,273
1936	262,013	943,558	450,064	387,030	16,768,476
1937	349,630	1,508,276	534,257	411,113	22,857,302
1938	1,174,886	1,174,494	409,128	1,379,296	20,055,550

PRODUCTION OF VEGETABLE WAX, CANDLES, AND MANUFACTURES OF OILS

(In yen)

Year	Wood Wax	Candles	Boiled Oil	Hardened Oil	Hardened Wax	Oleine	Stearine	Total of Manufactures
1934	1,705,148	5,095,485	3,373,463	13,223,601	404,608	693,608	3,895,385	21,590,665
1935	2,228,715	5,201,888	5,837,861	19,173,264	254,064	563,137	5,480,962	31,309,288
1936	2,463,958	7,057,847	7,172,709	21,849,043	440,692	605,173	5,028,891	35,096,508
1937	1,694,821	7,250,847	4,337,093	27,545,731	101,094	684,425	7,209,146	39,877,489
1938	2,554,768	9,099,999	6,625,830	30,670,785	434,635	491,444	4,656,372	42,979,066

IMPORTS OF VEGETABLE AND ANIMAL OILS, TALLOW AND MANUFACTURES THEREOF

(In yen)

Year	Olive Oil	Other Vegetable Oils	Beef Tallow	Hardened Oil	Total including Others
1935	908,625	—	2,340,363	—	—
1936	749,000	6,891,000	1,644,000	124,000	197,509,000
1937	1,234,000	9,720,000	1,949,000	104,000	297,878,000
1938	713,000	2,312,000	431,000	848,000	326,934,000
1939	253,000	2,437,000	117,000	1,281,000	262,518,000

EXPORTS OF VEGETABLE AND ANIMAL OILS, WAX, AND MANUFACTURES THEREOF

(In yen)

Year	Perilla Oil	Bean Oil	Rapeseed Oil	Fish Oil	Whale Oil	Vegetable Wax	Hardened Oil
1935	10,052,610	1,420,350	11,212,126	6,264,542	628,609	1,444,583	8,920,875
1936	14,981,000	931,000	10,547,000	9,306,000	874,000	1,812,000	10,002,000
1937	5,683,000	1,918,000	3,409,000	14,548,000	751,000	2,244,000	10,195,000
1938	1,287,000	329,000	2,095,000	—	—	1,475,000	4,651,000
1939	4,259,000	3,546,000	5,101,000	—	—	2,809,000	4,393,000

Rubber Industry

The rubber industry in Japan began with the establishment in 1886 of the Mitatsuchi Rubber Company, a limited-partnership concern, in Tokyo. The industry developed steadily through the Sino-Japanese and the Russo-Japanese Wars of 1894-1895, and 1904-1905. In 1909 there were 20 mills, 900 workers and production reached ¥4,000,000 in value. During the World War the industry further developed. The earthquake of 1923 destroyed about 80% of the rubber manufacturing capacity of

Tokyo and Yokohama districts, and many people were gravely doubtful as to whether the rubber factories in those districts would ever revive, but reconstruction quickly took place and the factories rebuilt. In 1937 the total production in the country by mills employing more than 5 persons was as large as ¥184,764,000 in value, but the figure would be much larger if goods produced by people working in their own homes were included.

PRODUCTION OF RUBBER MANUFACTURES IN JAPAN

Soft Rubber Manufactures

(Value in ¥1,000)

Year	Shoes and Other Footwear		Toys	Tyres and Accessories	For Machinery
	Pairs	Value			
1934	44,305,294	25,102	3,547	40,588	491
1935	54,802,185	28,973	4,619	45,907	1,132
1936	44,390,727	31,790	4,984	51,066	859
1937	64,636,802	45,820	5,024	75,086	2,521
1938	55,395,702	36,988	4,864	60,459	8,587

Year	Soft Rubber Manufactures			Total	Hard Rubber Manufactures	Grand Total
	Belts	Rubber Pipes	Others			
1934	7,165	3,448	20,159	100,503	2,715	103,218
1935	8,262	4,422	23,113	116,406	2,620	119,026
1936	8,749	5,230	29,047	131,729	3,558	135,287
1937	13,871	7,560	44,011	193,896	7,814	201,710
1938	17,083	10,550	38,387	176,921	7,843	184,764

IMPORTS OF RAW RUBBER AND EXPORTS OF PRINCIPAL RUBBER MANUFACTURES

(In yen)

Exports of Principal Rubber Manufactures

Year	Imports of Raw Rubber	Exports of Principal Rubber Manufactures			Belts, Hoses, etc.
		Boots & Shoes	Tires for Rikisha, Bicycles & Other Vehicles	Toys	
1934	57,337,000	3,332,000	9,994,000	6,406,000	5,216,000
1935	51,636,065	2,699,337	9,945,667	4,195,171	6,568,000
1936	72,957,000	1,832,000	9,939,000	4,641,000	7,424,000
1937	99,217,000	2,886,000	12,983,000	4,279,000	10,215,000
1938	51,374,000	1,568,000	7,799,000	2,197,000	9,964,000
1939	57,490,000	563,000	9,562,000	2,383,000	13,823,000

Celluloid

General

The Japanese celluloid industry made considerable development during the World War. Owing to a heavy demand coming from European countries, where factories were closed by the War, Japanese celluloid products once dominated the world's markets, but with the termination of the War, foreign products quickly regained their position in the markets captured by Japan during the War, and for some years the industry was in a state of depression. Gradually penetration was effected by traders and exporters, and overseas markets were largely restored, especially after the replacement of the gold embargo in December 1931. The domestic market has been prosperous for many years, without being affected very much by changes in economic conditions.

The Dai Nippon Celluloid Kaisha is the largest manufacturer, with a subscribed capital of ¥20,000,000. 75 per

cent of the total production in Japan comes from this company, while the remaining 25 per cent is divided among about ten small manufacturing concerns. The company, which has a virtual monopoly of celluloid manufacturing in this country, concentrates its energies on exporting. Nearly 80 per cent of Japan's total exports of celluloid are the produce of this company.

The company is also the largest shareholder of the Fuji Photo-Film Company established in 1934 with a capital of ¥10,000,000. This company has a capacity of producing 150 million feet, and nearly monopolizes the manufacture of films in Japan, which amounted to ¥14,270,000 in 1939; the other film producing company being the Oriental Photo Industrial Company capitalized at ¥4,300,000.

Statistics Production of raw celluloid, celluloid manufactures, and exports of the same follow:

PRODUCTION OF CELLULOID AND MANUFACTURES THEREOF

Year	Raw Celluloid		Toys	Manufactures			Total	Grand Total
	Quantity in metric ton	Value		Combs	Others	Total		
1934	10,393	20,277	1,636	1,090	4,640	7,367	27,644	
1935	13,033	24,649	1,975	1,208	6,208	9,392	34,042	
1936	13,813	24,439	1,989	1,169	5,796	8,956	33,396	
1937	14,227	25,391	3,408	2,486	6,985	12,879	38,270	
1938	11,902	24,090	1,833	1,979	8,999	12,812	36,902	

EXPORTS OF RAW CELLULOID AND MANUFACTURES THEREOF

Year	Raw Celluloid		Toys	Manufactures			Total	Grand Total
	Quantity in metric ton	Value		Combs	Armlets	Others		
1934	1,804	3,303	3,708	4,260	—	3,223	11,191	14,494
1935	2,033	3,469	6,054	4,414	1,983	3,089	15,550	19,021
1936	2,242	3,717	6,338	3,857	1,815	4,271	16,280	19,997
1937	2,100	3,952	7,606	4,854	2,711	5,403	20,574	24,576
1938	1,225	2,730	4,841	2,851	1,664	4,044	13,400	16,130
1939	1,203	3,152	4,510	2,596	1,294	4,162	12,562	15,714
1940 (Jan.-Sept.)	1,174	3,714	3,627	1,868	690	2,138	8,323	12,037

Dyestuffs

Through Governmental protection extending over many years, the Japanese dyestuff industry is now well established. Japan supplies 99 per cent of all sulphuric dyes demanded domestically. Concerning ratios of high-grade dye supplies, Japan can supply 86 per

cent of miscellaneous dyes, 85 per cent of acid dyes, 88 per cent of mordant dyes and 94 per cent of vat dyes for internal use. Research in producing these dyes is under way by the Mitsui Mining and Japan Dyestuff Manufacturing Companies. The Teikoku Senryo

(Imperial Dyestuffs Manufacturing) Company is another producer of dyestuffs capitalized at ¥5,000,000.

On account of the development of the iron manufacturing industry, Japan is now well provided with coal-tar, material required for the production of dyestuffs. Accordingly, efforts are now being made to promote the dyestuff industry with a view to making the country self-sufficient and self-supplied in dyestuffs.

Imports of dyestuffs are decreasing, because of State control of trade and the advance of the industry in Japan, although somewhat increased in 1939 as shown below:

IMPORTS OF DYESTUFFS

Colors	1937	1938	1939
	(In ¥1,000)		
Basic	1,246	145	217
Direct	4,708	834	1,308
Acid	2,537	644	803
Mordant and Intermediate	2,651	389	364
Vat	4,079	366	399
Others	1,707	460	416
Total	16,928	2,838	3,507

Note: The total quantity was 2,257 metric tons in 1937, 253 metric tons in 1938 and 306 metric tons in 1939.

The domestic production of dyes during 1938 compared with the preceding four years and exports of Japan-made dyes since 1934, follow:

PRODUCTION OF SYNTHETIC DYESTUFFS

Year	Basic		Direct		Acid		Mordant	
	Quantity 1,000kg.	Value ¥1,000	Quantity 1,000kg.	Value ¥1,000	Quantity 1,000kg.	Value ¥1,000	Quantity 1,000kg.	Value ¥1,000
1934	765	4,266	2,183	6,816	554	2,091	178	750
1935	677	3,774	2,700	7,726	756	2,781	341	1,409
1936	994	4,569	2,998	8,808	977	3,984	264	1,206
1937	1,058	5,541	3,812	13,584	775	3,831	493	2,099
1938	892	4,908	4,591	18,985	675	4,509	438	2,765

Year	Sulphide		Artificial Indigo		Vat Colors		Others and Total	
	Quantity 1,000kg.	Value ¥1,000	Quantity 1,000kg.	Value ¥1,000	Quantity 1,000kg.	Value ¥1,000	Quantity 1,000kg.	Value ¥1,000
1934	12,144	5,107	1,724	3,803	28	400	27,446	
1935	12,450	4,673	2,816	5,760	26	627	31,265	
1936	11,198	3,684	1,740	4,794	29	506	33,721	
1937	13,160	5,410	2,228	6,264	323	1,303	45,140	
1938	18,879	9,148	1,624	4,170	387	2,080	50,038	

PRODUCTION OF ANILINE AND INTERMEDIATES

Year	Aniline		Others and Total
	Quantity in 1,000kg.	Value in ¥1,000	
1934	3,821	3,033	8,492
1935	4,043	2,924	12,077
1936	3,943	2,328	13,115
1937	4,788	5,081	25,581
1938	7,050	10,670	44,382
1939 (estim.)	6,143	8,799	—

Indigo Indigo is one of the indispensable dyestuffs for dyeing Japanese cloth and the material is obtained from

EXPORTS OF SYNTHETIC DYESTUFFS

Year	Quantity in metric ton	Value in ¥1,000
	1934	6,423
1935	8,882	7,304
1936	7,000	5,990
1937	6,062	6,269
1938	6,749	7,768
1939	13,218	18,532

various grasses. The production of this natural material was as follows:

PRODUCTION OF INDIGO BALLS

Year	Coarse Indigo		Indigo Balls		Year	Coarse Indigo		Indigo Balls	
	Quantity Metric ton	Value ¥1,000	Quantity Metric ton	Value ¥1,000		Quantity Metric ton	Value ¥1,000	Quantity Metric ton	Value ¥1,000
1933	1,181	396	298	83	1936	1,169	347	320	109
1934	1,176	314	326	105	1937	1,182	346	322	112
1935	1,128	303	269	87	1938	1,493	408	322	78

Pyrethrum

Hokkaido is noted for producing the pyrethrum flower, the raw material for anti-insect powder largely used for making mosquito incense and anti-bed bug powder. Pyrethrum was formerly exported through Kobe merchants, but owing to inconvenience the Hokkaido Government encouraged direct shipments from Hokkaido, the first direct shipment being made in September 1933. The Hokkaido Government also caused pyrethrum manufacturers to organize the Manufactured Pyrethrum Industrial Guild, as the first step to the export of manufactured pyrethrum abroad, which had hitherto been exported in the shape of dried flowers. As an international commodity, manufactured pyrethrum is steadily gaining ground, and under the encouragement of their government, the Hokkaido pyrethrum raisers are manufacturing it for

direct export to the United States, Saigon, Bangkok, Rangoon, Manila, Singapore, Sourabaya, Batavia, Calcutta and Bombay, and to such European markets as London, Hamburg and Paris. Wakayama prefecture is also noted for raising pyrethrum flowers. Production and exports of pyrethrum during the last few years follow:

PRODUCTION AND EXPORTS OF PYRETHRUM

Year	Production		Exports	
	Quantity Metric ton	Value ¥1,000	Quantity Metric ton	Value ¥1,000
1934	7,798	10,574	5,630	7,447
1935	12,746	7,332	7,665	6,400
1936	11,051	5,710	5,608	3,207
1937	9,560	8,214	8,844	7,693
1938	9,477	12,053	4,621	6,103
1939	9,574	18,340	3,823	7,149

VALUE OF PRODUCTION OF CHEMICAL INDUSTRY

(Unit: ¥1,000)

	1936	1937	1938		1936	1937	1938
	Industrial Chemicals					Industrial Chemicals	
Sulphuric acid	47,870	68,712	71,075	Chlorine	1,765	1,536	1,879
Hydrochloric acid	4,372	5,775	6,564	Carbon	402	503	606
Soda ash	23,145	29,227	51,353	Others	496	855	1,299
Washing soda	262	227	497	Total	14,386	14,338	22,137
Carbonate of soda	2,253	2,247	1,530	Acetic acid	5,207	6,617	7,554
Caustic soda	34,026	64,197	91,088	Salicylic acid	367	1,128	1,037
Carbide	36,620	43,893	40,572	Tannic acid	323	334	555
Chromic acid	930	1,109	1,278	Naphthalene	2,109	2,005	2,493
Chromic soda	1,738	1,991	2,655	Acetone	426	641	—
Iodine	260	405	488	Methanol	1,352	2,472	—
Iodide of potassium	297	512	498	Alcohol	2,595	3,049	6,766
Bleaching powder	4,256	5,609	5,792	Ether	987	1,179	1,454
Compressed gas:				Glycerine	10,508	23,136	13,697
Oxygen	9,545	9,599	15,447	Phosphorus	1,379	1,442	1,427
Hydrogen	2,177	1,844	2,903	Glauber's salt	1,532	2,484	2,947
				Sulphide soda	2,108	3,894	4,686
				Sillicic soda	1,547	1,798	2,573
				Chloride of potash	112	101	254

	1936	1937	1938		1936	1937	1938
Niter	1,024	1,522	2,435	Vegetable oil and wax	90,157	100,313	78,951
Ammonium nitrate	536	551	1,632	Camphor	8,931	9,676	8,039
Magnesium carbonate	3,694	4,097	2,868	Camphor oil	1,642	1,281	1,232
Chloride of lead	824	1,738	2,075	Peppermint oil and menthol	9,280	11,149	10,219
Alum	897	1,054	1,414	Other-vegetable volatile oil	876	1,317	1,707
Sulphuric aluminium	1,639	2,112	2,408	Animal oil and wax	16,768	22,857	20,055
Others	119,871	207,359	267,404	Wood-wax	2,463	1,694	2,554
Total of Industrial chemicals	329,467	506,949	621,222	Candles	7,057	7,250	9,099
Medicines	113,319	123,573	155,308	Worked oils	35,096	39,877	42,979
Dyestuffs	46,836	70,730	94,427	Rubber manufactures	135,288	201,710	184,764
Tannin extract	198	388	403	Phenol manufactures	7,447	14,973	19,021
Artificial perfumery	4,943	5,250	5,311	Gramophone disk	19,299	15,263	18,160
Paints:				Pulp	47,796	65,415	81,567
Lacquer	1,072	2,387	2,632	Paper	250,983	335,646	364,048
Varnish	11,318	11,064	16,948	Celluloid	33,396	38,270	36,902
Enamel	6,389	5,940	8,848	Vulcanized fiber	4,017	7,329	8,089
Paint for boats	1,963	2,178	3,384	Rayon yarn	212,974	332,357	407,429
Paint for nitrate cotton	2,383	915	4,078	Film for photograph	4,666	6,715	9,965
Shoe-cream	825	1,222	1,689	Dry-plate	2,042	1,899	3,714
Total including others	37,804	46,105	65,982	Negative paper	4,129	5,546	8,491
Colors:				Fertilizers	291,531	379,883	417,304
Colors for painting	2,771	2,119	2,298	Worked fur	626	1,134	5,336
Indian ink	912	1,347	1,259	Glue and gelatine	5,528	9,084	12,683
Printing ink	8,682	8,967	9,348	Polishing powder	1,860	2,206	2,663
Other ink	4,348	4,844	5,207	Other articles for polishing	3,428	6,247	12,184
Flowers of zinc	6,697	11,208	11,621	Carbon manufactures (Electrode)	12,455	17,441	30,165
Total including others	36,715	45,532	44,743	Coke	(9,581)	12,106)	—
Soap	51,908	55,087	72,196		79,278	150,147	203,309
Articles for toilet:				Grand total including others	2,202,362	3,070,245	3,657,418
Perfume	1,297	1,446	2,249				
Perfume oil	3,904	6,093	6,667				
Tooth powder	7,534	11,219	14,865				
Face-paint	7,809	7,871	8,727				
Beauty-wash	3,280	4,684	5,447				
Toilet-cream	9,748	12,217	15,314				
Total including others	43,438	49,292	60,939				
Explosives	25,018	35,918	43,750				

Note: Figures are for production of factories where more than 5 operatives are employed, and do not coincide with figures given elsewhere for certain articles.

CHAPTER XXII

MISCELLANEOUS INDUSTRIES

OBAYASHI-GUMI, LTD.

**BUILDING
CONTRACTORS**

Head Office:
Kyobashi, Higashi-ku,
Osaka, Japan

BRANCHES:
Nagoya, Fukuoka, Keijo,
Mukden & Peking

BUSINESS OFFICES:
Yokohama, Kyoto, Kobe,
Hiroshima & Sendai

DETACHED OFFICES:
Taihoku, Dairen, Hsinking,
Anshan, Tientsin & Shanghai

FACTORIES:
Chishima-machi, Taisho-ku,
Osaka & Minami-Suna-machi,
Joto-ku, Tokyo



**KABUSIKI KAISYA
SIMIZU-GUMI**

(SIMIZU-GUMI CO., LTD.)

ESTABLISHED 1804

Cable Address: "SIMIZGUMI" Tokyo

Codes Used: Bentley's and Acme

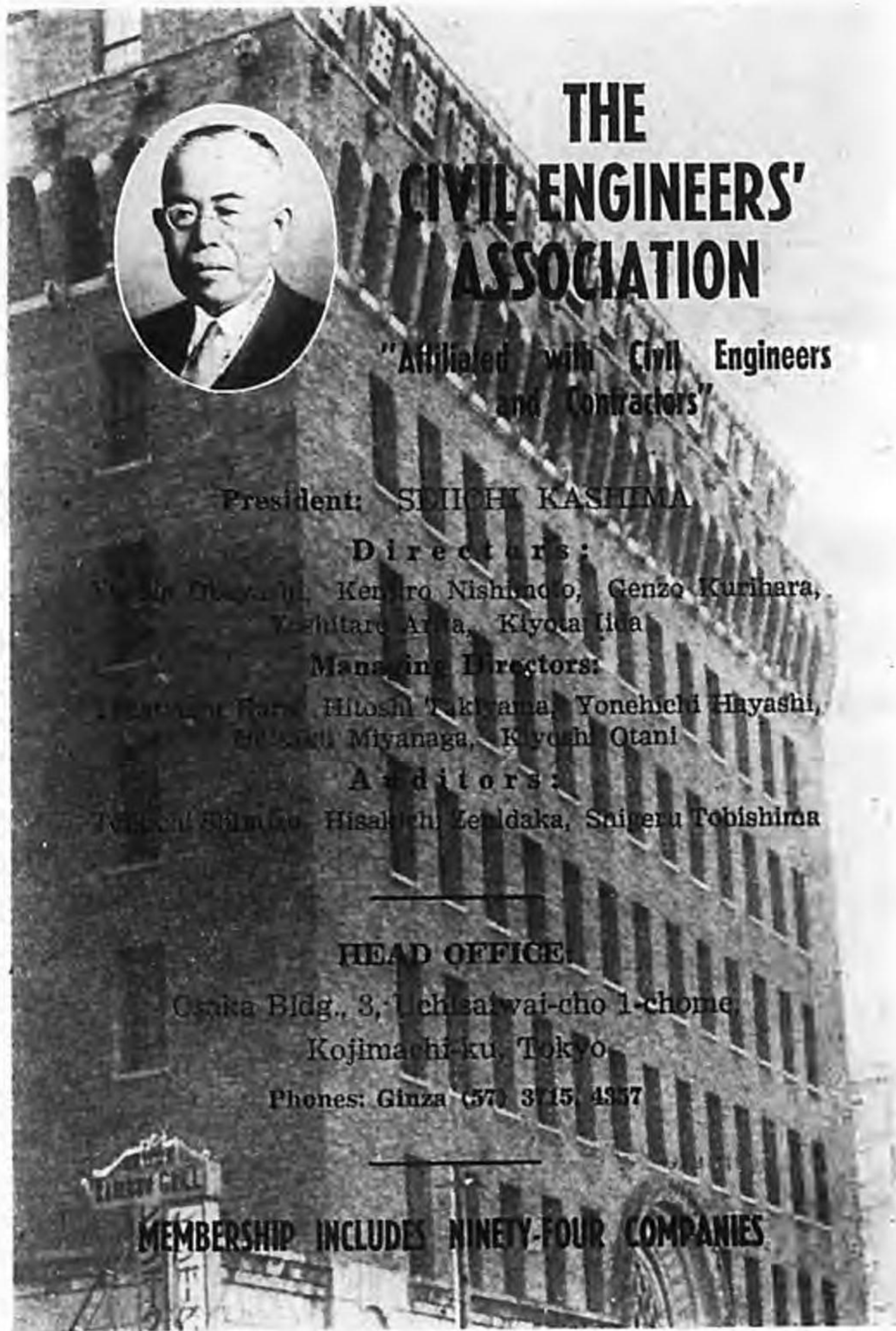
GENERAL CONTRACTORS

MAIN OFFICE:

1, Takara-tyo Nityome, Kyobasi-ku, Tokyo

BRANCHES:

Osaka, Kyoto, Nagoya, Sapporo, Hukuoka,
Keizyo, Taihoku, and all other principle
cities in Nippon and Peking, Tientsin,
Tsingtao, Tsinan, Shihkiachwang, Kalgan,
Tatung-hsien, Nanking, Shanghai, Hankow,
Canton



THE CIVIL ENGINEERS' ASSOCIATION

"Affiliated with Civil Engineers
and Contractors"

President: **SHICHI KASHIMA**

Directors:

Yoshio Ogasawara, Kenro Nishimoto, Genzo Kurihara,
Yoshitane Arita, Kiyota Iida

Managing Directors:

Shunzo Kato, Hitoshi Takayama, Yonehiko Hayashi,
Masao Miyanaga, Kiyoshi Otani

Auditors:

Tokuo Shimizu, Hisakichi Zenshaka, Saigeru Tobishima

HEAD OFFICE:

Osaka Bldg., 3, Uchisaiwai-cho 1-chome,

Kojimachi-ku, Tokyo.

Phones: Ginza (57) 3-15, 4337

MEMBERSHIP INCLUDES NINETY-FOUR COMPANIES

CHAPTER XXII

MISCELLANEOUS INDUSTRIES

Wheat Flour

Before the Russo-Japanese War It was not until after the Russo-Japanese War (1904-5) that the wheat flour industry made any progress in Japan. Prior to the war there was a fairly large consumption, but manufacturing was only in the infant stage, most of the production being with the help of water-wheels. The daily output by this method was only 10 to 50 or 60 bags; the quality was poor and not uniform and, being packed in straw bags, the product was not at all satisfactory. It was only in the year 1895 that wheat flour was first produced on a modern basis by machinery. In that year, the Nippon Seifun Kaisha, Ltd., began to operate mills with a capacity of 200 koku per day, and gradually, mills with a capacity of 50 to 100 koku a day were established, but progress was very slow. However, the demand for flour increased and as production could not keep pace with it imports naturally increased. In 1895, imports were 280,000 bags, valued at ¥400,000, ten years later imports increased to 4,990,000 bags, valued at ¥9,950,000. Imported and water-mill produced domestic flour together satisfied practically the whole of home consumption, while domestic flour made by machinery formed but a very small part of the supply. The imported flour coming chiefly from the United States of America, was of a far superior quality to the home product.

After the Russo-Japanese War Many flour mills were established on a modern basis during the time of the great boom which followed the Russo-Japanese War, and production capacity was greatly expanded, but a contraction was brought about by the closing down of many of the newly established mills when the reaction later set in. In 1914, when the World War started the capacity of production by machinery was 9,000 barrels and this, by 1922, had in-

creased to over 20,000 barrels. During those seven years the industry experienced unprecedented prosperity, and with this development on modern lines, domestic producers who made flour in the old-fashioned way lost nearly all their customers and, further, imported flour was practically shut out of the country.

The Industry at Present After 1918 the demand for wheat flour, keeping pace with the advance in the standard of living, greatly increased. The extended westernization of the country in recent years largely accounts for this and has brought about a consequent heavy demand for wheat. Home production has not increased to meet the demand, the result being, as the following tables show, a heavy annual importation of wheat. An attempt, therefore, has been made by the Government to increase domestic production through tariff and increase of wheat acreage, in which they were highly successful. The production increased very much in 1933 in proportion to the increased acreage, which was further accelerated in 1935, when an all-time record high was established. The production in 1936 decreased by 7.2 per cent as compared with the preceding year. But, 1937 production recorded highest in the history with 9,996,048 koku. In 1938, it decreased to 8,971,000 koku, but the following year again established a new record.

PRODUCTION OF DOMESTIC WHEAT AND ITS ACREAGE

Year	Production koku	Acreage cho
1936	8,961,329	688,959
1937	9,996,048	724,602
1938	8,971,563	725,100
1939	12,113,058	746,000
1940	13,093,500	841,200

QUANTITIES OF WHEAT IMPORTED

Year	Countries from Which Imported					Total Including Others	Value (In ¥1,000)
	China	U.S.A.	Canada	Australia	Manchou- kuo		
1935	3,000	45,994	881,786	5,558,084	—	7,417,300	43,199
1936	321,947	61,818	164,000	2,812,246	236,149	5,171,076	33,650
1937	25,202	18,860	65,500	1,679,998	205,988	3,114,102	29,604
1938	53,665	—	—	510,235	298,172	1,104,416	9,557
1939	279,500	—	13,863	40,100	—	539,090	4,090

EXPORTS OF WHEAT FLOUR

Year	Countries to Which Exported					Value (In 1,000 yen)
	Manchoukuo	China	Kwantung L.T.	Dutch East Indies	Others and Total	
1935	2,035,048	29,123	2,366,348	10,323	4,819,629	33,699
1936	736,486	89,965	1,065,858	19,500	2,165,330	17,621
1937	231,900	1,283,384	1,047,577	9,700	2,683,066	30,745
1938	1,198,597	1,880,771	1,679,180	200	4,758,869	60,715
1939	1,460,500	436,600	1,554,400	—	—	54,227

FLOUR PRODUCTION, CONSUMPTION, ETC.

Year	(In bags)			
	Production	Import	Export	Home Consumption and in Stock
1935	49,700,000	93,000	13,026,000	36,767,000
1936	38,993,000	104,000	5,852,000	33,242,000
1937	38,335,000	410,000	7,251,000	31,159,000
1938	42,964,000	19,000	12,862,000	30,121,000
1939	37,957,000	122,000	9,328,000	28,951,000

Note: A bag=37 kin. Figures for production are based on the investigation of the Nisshin Flour Company.

Sugar

History and Development The art of making sugar was introduced from China about two hundred years ago, but no great progress is recorded in sugar manufacture until after the Restoration, and even then it remained as a farmers' sideline until the end of the Sino-Japanese War of 1894-5, when Taiwan, well-known for its sugar production, was ceded to Japan by China. This marked a new era in the sugar industry. In 1896, a sugar refining company was organized in Osaka and from that time the industry began to develop.

The Government undertook to levy a duty on raw sugar in 1899, and, by successive steps, this duty has reached the present rate. In 1911, a tariff of a

similar nature was imposed, for the first time, on refined sugar.

In view of the fact that Taiwan is ideal both in temperature and rainfall for cane growing, the Government decided to encourage the establishment of sugar mills in the Island. With this in view it established the Temporary Sugar Bureau as a branch of the Government of Taiwan. The Bureau subsidized sugar companies in establishing sugar mills and purchasing the required machinery. It imported cane seedlings and distributed them to cane growers. It gave, too, subsidies for the purchase of fertilizers, and in various other ways succeeded in dispensing as subsidies, up to 1924, a sum amounting to more than thirteen

million yen. As the result of these subsidies, the industry has developed to the present stage. In 1902, the production of raw sugar in Taiwan was only about 600,000 piculs, but by 1931 this had increased to over 13,000,000 piculs.

In 1901, the Taiwan Sugar Co., Ltd., was organized. Raw sugar mills with all new machines were established and war was declared against the old-fashioned machines which were only able to produce raw brown sugar. Development was destined to be slow, for the plantations and mills were subject to

attacks from the native savages, but this difficulty was gradually overcome and during the prosperity that visited Japan after the Russo-Japanese War, many new companies were organized and the industry developed rapidly.

Present State The sugar industry in Shikoku, Kyushu, and the Loochoo Islands is making no headway, but that in Taiwan and the South Sea Islands is rapidly progressing, and at present it is the Taiwan sugar that controls the sugar market in Japan. Refining is making good progress in Japan proper.

PRODUCTION OF SUGAR

(Unit: 1,000 piculs)

Year	Taiwan	Japan Proper	Hokkaido (Beet)	Chosen	South Sea Islands	Total
1931-1932	16,484	1,651	405	29	696	19,266
1932-1933	10,561	1,712	402	—	729	13,406
1933-1934	10,783	1,551	383	—	750	13,469
1934-1935	16,094	1,752	587	—	1,135	19,568
1935-1936	15,034	1,981	515	—	819	18,351
1936-1937	16,789	1,559	678	—	961	20,037
1937-1938	16,496	1,715	694	—	1,241	20,210
1938-1939	23,645	2,390	681	—	1,170	27,951
1939-1940	18,879	1,823	415	58	1,025	22,200
1940-1941*	14,370	1,727	423	21	1,050	17,591

* Estimate.

Source: The report of the Japan Sugar Association.

EXPORTS OF REFINED SUGAR BY DESTINATION

(In piculs)

Year	China	Manchou- kuo	Kwan- tung	Total Including Others
1931	1,895,667	88,922	370,810	2,622,211
1932	466,877	54,790	799,840	1,389,507
1933	901,525	96,703	1,015,941	2,172,317
1934	1,041,527	162,255	715,093	2,019,868
1935	1,481,898	227,389	792,578	2,669,213
1936	905,171	193,222	1,780,225	2,978,643
1937	1,159,358	216,087	1,001,814	2,482,145
1938	701,882	293,775	1,271,668	2,267,853
1939	986,500	236,800	637,400	1,860,800
1940 (Jan.- Sept.)	79,700	2,500	3,300	474,700

IMPORTS OF REFINED SUGAR BY ORIGINS

(In piculs)

Year	Java	Total including Others
1931	3,304,251	3,305,275
1932	644,927	671,299
1933	2,184,499	2,210,124
1934	1,727,188	1,732,188
1935	2,323,117	2,341,841
1936	3,396,964	3,900,079
1937	2,698,347	2,845,068
1938	635,183	639,858
1939	13,100	13,600
1940 (Jan.-Sept.)	400	1,700

SUPPLY AND DEMAND OF SUGAR IN JAPAN PROPER

(Compiled by the Taiwan Government-General)

(In 1,000 piculs)

	1933	1934	1935	1936	1937	1938
Production in Japan proper	2,118.7	1,946.1	2,316.8	2,505.2	2,237.4	2,410.3
Imports from foreign countries	2,210.1	1,732.1	2,341.8	3,600.0	2,845.0	639.8

	1933	1934	1935	1936	1937	1938
Imports from territories	10,541.1	11,616.3	15,152.5	13,076.6	13,043.4	12,411.8
Exports to foreign countries	2,172.3	2,019.8	2,069.2	2,978.6	2,482.1	2,267.8
Exports to territories	162.3	211.4	227.9	241.2	236.5	245.0
Consumption in Japan proper	12,535.3	13,063.3	16,914.0	15,962.0	15,407.2	12,949.1
Consumption per capita (Unit: kin)	18.56	19.06	24.30	22.61	21.52	17.85

Note: Readers are referred to Chapter XLI, Taiwan, where the conditions of the sugar manufacturing industry in that island are mentioned in detail.

Brewing

Beer

History Beer was brewed in Japan about 85 years ago by a certain scholar, Ko Kawamoto, who, as he learned how to brew it when he visited Admiral Perry's fleet, on the latter's visit to Japan, tried to brew on his own private account. In 1870, beer was brewed for the first time on a modern industrial basis by an American, Gobland, at Amanuma, Yokohama. Four years later, Marquis K. Kuroda saw that the soil of Hokkaido was particularly suitable for barley, so he established a brewery in Sapporo, and soon others were built in Meguro, Tokyo, in Suita, Osaka, in Hodogaya, Yokohama, and other places, and the industry has so developed that at present Japan has 4 brewery companies and fifteen breweries with a total capacity of about 2,000,000 koku. But

in recent years curtailment is required by the Government in connection with the national provision control policy. The consumption of beer in Japan proper in 1938 amounted to 1,180,000 koku.

Year	Brewery Production Value	
	in koku	in ¥1,000
1935	14	1,047,213
1936	15	1,312,496
1937	15	1,275,055
1938	15	1,472,408
1939 (estimate)	15	1,784,427
1940 (..)	15	1,465,602

Exports of Beer The exports of beer in 1939 amounted to 179,192 koku. Exports to the yen bloc area greatly decreased, while those to third countries increased largely because of trade control.

EXPORTS OF BEER

(Quantity in koku and value in ¥1,000)

Destination	1936		1937		1938		1939	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Manchoukuo	28,497	1,158	7,507	308	12,246	525	8,350	364
Kwantung L. T.	41,466	1,750	52,680	1,980	41,481	1,646	26,398	1,096
China	12,679	555	23,523	944	149,811	6,034	106,865	5,148
Hongkong	2,841	149	2,121	106	1,696	56	1,407	71
British India	13,926	650	16,959	753	12,986	639	15,468	787
Straits Stmts.	2,880	140	2,973	141	1,493	63	1,645	99
Dutch Indies	3,108	164	2,481	126	1,338	62	2,119	119
Others and total	132,503	5,912	134,977	5,686	240,488	10,019	179,192	8,602

Japanese Saké

History Japanese saké, brewed from rice, has been the principal alcoholic liquor of the Japanese from olden times. It is brewed everywhere in the country, but the most famous places are the "Nada Gogo," or five villages in Hyogo prefecture, the climatic conditions of which are peculiarly suited for its production. In recent years, Hiroshima and

Fukuoka prefectures have also begun to brew saké of superior grade. The best rice for saké brewing is raised in Kumamoto, Hyogo and Okayama prefectures.

As saké has been the chief drink of the people for many centuries it has been heavily taxed all along. In 1879, a tax of ¥2 per koku was levied and since then the rate has been gradually increased until it now amounts to ¥45

per koku and brings in an annual revenue to the Government of ¥200,000,000.

No study of brewing saké on a scientific basis was started until as late as 1895. In 1904, a Brewery Experimental Station was established by the Government, at Oji, Tokyo, various experiments were made, and many good experts trained. The art of brewing has now

advanced a great deal and the quality of saké brewed has become practically uniform. The quantity now brewed annually is about 5,000,000 koku nearly all of which is consumed at home, only 90,000 koku being exported to China and several other countries.

Present Condition Production of various kinds of saké in recent years is as follows:

PRODUCTION OF SAKE BY KINDS

Year (Oct.-Sept.)	No. of Brew- eries (Sept.)	(In 1,000 koku)					Total
		Refined Saké	Unrefined Saké	White Saké	Sweet Saké	Distilled Saké	
1930-31	9,905	3,851	6	6	70	455	4,121
1931-32	9,570	3,284	5	6	87	445	3,829
1932-33	9,236	3,807	5	6	100	509	4,429
1933-34	8,971	4,012	6	6	92	528	4,646
1934-35	8,745	3,772	5	6	87	499	4,371
1935-36	8,580	3,784	5	6	97	534	4,426
1936-37	8,428	3,983	5	5	105	542	4,641
1937-38	8,260	4,069	5	5	92	556	4,729

Supply and Demand According to the report of the Japan Saké Brewers' Association the shipment of refined saké in recent years were as follows:

SUPPLY AND DEMAND OF SAKE (Saké Brewers' Association figures)

Saké Year (October-September)	(In koku)		
	Production	Shipped	Stock
1933-34	4,314,096	3,857,112	2,526,894
1934-35	4,068,794	3,852,846	2,407,572
1935-36	4,282,610	4,098,128	2,366,661
1936-37	4,378,687	3,998,369	2,314,734
1937-38	3,960,915	4,274,244	1,803,502
1938-39	2,453,059	2,888,879	1,255,579

Wine The following are the annual figures for the production of wine in recent years:

PRODUCTION OF WINE

Year (March-Feb.)	No. of Wineries	Production in koku
1933-34	10,124	13,613
1934-35	11,710	18,424
1935-36	12,190	19,066
1936-37	12,408	19,276
1937-38	12,316	31,449

According to the "Factory Statistics" published by the Ministry of Commerce and Industry the value of all kinds of spirits produced in recent years was as follows, refined saké comprising over 62 per cent of the total.

VALUE OF PRODUCTION OF ALL KINDS OF SPIRITS

Year	Value in yen
1934	384,199,683
1935	404,133,245
1936	435,661,300
1937	492,830,805
1938	568,385,820

Flavors

Oriental flavors are produced in considerable quantities as indispensable for Japanese cooking. The production of soy, or Japanese sauce made of wheat, in factories amounted to 5,566,815 hectoliters valued at ¥94,097,842 in 1938, that of miso, or bean-mash, 243,145 metric tons valued at ¥35,278,295. Saké- lees is used as soup or a soft drink, the production in the same year amounting to ¥9,522,194. The production of vinegar amounted to 661,758 hectoliters valued at ¥2,274,350.

**VALUE OF PRODUCTION OF
SOY, MISO, ETC.**

(Unit: ¥1,000)

Year	Soy	Miso	Vinegar	Saké- lees	Sauce and Ketchup
1933	61,257	16,535	1,953	6,558	3,105
1934	65,477	18,201	2,026	6,114	3,548
1935	65,767	20,124	2,214	6,748	4,163
1936	71,025	22,582	2,051	6,706	4,801
1937	82,118	26,619	2,403	8,371	5,756
1938	94,097	35,278	2,274	9,522	5,123

Soft Drinks

As Japan is geologically blessed with mineral springs, the people were not slow to study their medicinal effects, and hot springs were used as baths from the olden times. As to the utilization of mineral spring water for drinking purposes, mineral water from Rokko Mountain in Hyogo prefecture was the first of its kind that was put on the market.

This was as late as 1833, and the drink was named "Mitsuya Hiranosui." Three years later, some Englishmen taught the making of artificially aerated water and with the importation of Cood's bottles and syphon-bottles the manufacture of sweetened aerated water originated. These drinks soon became very popular and the industry made rapid development. After the Russo-Japanese War, "Champion" cider was put on the market to be soon followed by lemonade, citron, and different kinds of syrup, etc.

At present the total production of soft drinks amounts to 710,000 koku a year, of which sweetened drinks account for 93%, the rest being ordinary unflavored aerated water or soda-water. Producers of soft drinks may be roughly divided into two classes. The first of these is composed of those who manufacture the drinks along with beer. These have good equipment and produce on a large scale. The second class is made up of those many who produce on a small scale and sell their products locally.

VALUE OF PRODUCTION OF SOFT DRINKS

(In yen)

	Cider	Ramune	Syrup	Others	Total
1931	8,509,930	1,803,975	970,528	2,068,945	13,953,384
1932	6,976,626	1,676,215	1,073,595	3,721,403	13,447,839
1933	14,132,015	1,424,789	1,182,207	2,950,569	19,689,580
1934	7,501,890	1,600,975	1,848,819	5,495,852	16,747,536
1935	10,365,531	1,611,915	1,615,720	4,023,263	17,616,429
1936	8,741,824	1,724,488	2,118,519	6,394,987	18,979,818
1937	10,703,174	2,108,597	2,025,136	6,367,072	21,803,979
1938	22,776,769	3,330,277	3,447,235	8,290,442	37,844,723

Canning

The canning industry in Japan was started as early as 1870, but the real impetus to its development was given by the Sino-Japanese and the Russo-Japanese Wars as they created a great demand for canned provisions for the Army and Navy. The Treaty of Portsmouth also served to further encourage this industry by giving Japan fishing rights in Kamchatka and the Maritime Province of Siberia, and together with the development of can manufacturing and floating canneries, the above have been the cause of the great progress in the canning industry as a whole.

Present Conditions At present, the packing industry in Japan is in a fairly developed state in all of its branches.

Canned meats have reached a stage where the quantity of production cannot be increased. The demand for meat in Japan has expanded so far that supply cannot keep pace with demand, a shortage of cattle is being felt and a plentiful supply for canning is not forthcoming. On the other hand, canned vegetables, such as canned bamboo shoots, are finding good markets in the U.S.A. and China. Of all the fruits procurable in cans pineapples are the most popular with the Japanese. They are produced in Taiwan, and of the 450,000 cases or more that are packed in that island about 400,000 cases are consumed in Japan proper while a greater part of the balance is sold in Taiwan, and only

a few thousand cases are exported to foreign countries. As to canned fish and shellfish, the production of canned crab and salmon dominates all others. In no other places are canned crabs produced in such large quantities as in Japan, and most of this production is exported to the U.S.A., annual exports being valued at about ¥10,000,000. Red

and silver salmon are finding a good market in Great Britain. The variety of canned provisions has greatly increased in recent few years, mainly for exports, the value of which reached 132 million yen in 1939, placing canned provisions among the major articles of Japan's foreign trade.

PRODUCTION OF CANNED PROVISIONS

(Compiled by The Canned Foods Association of Japan)

	Quantity (In 1,000 Cases)			Value (In ¥1,000)		
	1936	1937	1938	1936	1937	1938
Live-stock products:						
Meat	85	120	225	1,513	2,148	4,950
Meat-vegetable	30	75	175	345	870	2,275
Pork	65	70	75	875	966	1,238
Condensed milk	853	946	1,230	12,828	14,414	22,146
Total including others	1,065	1,246	1,770	14,076	18,965	31,778
Fishery products:						
Salmon and trout	2,400	2,524	2,438	47,293	50,953	58,663
Crab ("Taraba")	341	438	524	16,476	21,976	27,485
Other crabs	37	70	75	1,040	2,448	2,656
Tunny	560	682	392	5,174	8,019	5,510
Mackerel	270	527	181	110	3,825	1,577
Bonito	90	285	225	630	2,280	2,250
Sardine	—	2,067	1,550	—	13,463	10,357
Clam and "Asari"	44	49	229	360	322	1,944
Total including others	5,485	7,735	6,681	85,835	118,034	125,192
Fruit:						
Pineapple	1,181	1,100	1,631	8,622	7,650	12,721
Peach	95	85	155	758	808	1,628
Pear	15	35	165	138	333	1,568
Mandarin orange	920	1,224	1,941	4,876	7,346	11,644
Fruits-salad	17	25	70	255	400	1,120
"Mitsu-mame"	25	105	165	263	1,155	1,865
Jam	92	105	115	1,270	1,523	1,783
Total including others	2,512	2,879	4,586	17,689	20,620	35,917
Vegetable:						
"Fukushin zuké"	90	120	150	873	1,260	1,575
Asparagus	27	42	69	500	798	1,318
Peas	100	116	128	750	881	1,048
Red-peas	45	135	380	518	1,553	4,484
Bamboo-shoots	698	532	757	5,581	4,310	6,131
Total including others	1,130	1,298	2,154	10,000	12,400	21,492
Grand total	10,192	13,159	15,191	127,600	170,019	214,379

Note: In regard to canned fish and shell-fish, see Chapter XV, Fisheries.

EXPORTS OF CANNED PROVISIONS

(Compiled by the Ministry of Finance)

(In ¥1,000)

Kind	1936	1937	1938	1939
Meats	260	563	2,029	1,462
Crabs	17,200	19,874	15,244	30,323
Salmon and trout	26,939	27,492	38,463	35,999

Kind	1936	1937	1938	1939
Other fish and shell-fish	15,272	24,149	17,045	22,964
Vegetable	1,517	1,995	3,298	7,248
Fruit	6,219	8,130	9,880	22,193
Total value including others in ¥1,000	71,077	86,905	92,819	132,009
Total quantity in picul	1,914,622	2,446,910	2,526,234	3,035,679

Note: In regard to the exports by destination, see Chapter XI, Foreign Trade. Imports of canned foods were 35,933 piculs valued ¥1,341,000 in 1937, 9,073 piculs valued at ¥372,000 in 1938 and 2,550 piculs valued at ¥122,000 in 1939.

Other Important Foodstuffs Manufactured in Factories

VALUE OF PRODUCTION OF BREAD AND SWEETMEAT

Year	(In yen)		
	Confec-tionaries	Bread (including sweet bread)	Mizu-amé (wheat-gluten)
1934	95,088,745	5,870,740	14,020,795
1935	113,597,091	7,845,029	16,453,729
1936	119,285,645	10,261,173	20,173,231
1937	147,992,513	13,227,103	21,115,889
1938	178,775,867	13,799,966	24,881,545

VALUE OF MILK PRODUCTS

Year	(In yen)			Total including Others
	Condensed milk	Butter		
1934	9,393,650	2,827,081		21,210,448
1935	10,981,471	3,353,572		22,277,166
1936	10,662,310	3,054,820		24,036,598
1937	14,273,479	4,376,013		32,604,489
1938	13,609,870	6,702,072		38,406,972

VALUE OF PRODUCTION OF ARTIFICIAL BUTTER, ETC.

Year	(In yen)				
	Ham and Bacon	Artificial Butter	Salt	Vermicelli, Buckwheat-vermicelli, etc.	Starch
1934	1,185,868	575,965	4,121,651	5,492,733	9,683,397
1935	1,288,078	619,655	4,268,815	6,545,790	12,624,831
1936	1,781,196	928,591	4,168,491	7,716,469	17,018,911
1937	2,570,197	1,403,233	4,720,265	9,256,749	28,298,060
1938	2,678,296	1,136,134	7,410,145	9,448,266	40,769,900

PRODUCTION OF TEA

(Quantity in metric ton, Value in ¥1,000)

Year	Green Tea (Superior)		Green Tea (Common)		Japanese Black Tea		Black Tea		Total including Others
	Qty	Value	Qty	Value	Qty	Value	Qty	Value	
1934	115	419	22,741	11,891	1,998	756	1,414	842	15,122
1935	194	567	24,788	13,035	2,451	793	1,324	706	16,576
1936	220	555	26,845	15,697	4,641	1,535	552	1,190	19,990
1937	218	459	29,332	20,998	3,258	1,419	4,099	3,741	29,217
1938	433	391	24,996	14,372	10,635	5,015	3,887	2,743	24,467

The above table is made from the "Factory Statistics" figures, and include only production by the tea makers who employ more than 5 operatives. Figures of the production by all tea makers are given in Chapter XIII, Agriculture, Tea.

VALUE OF TOTAL OUTPUT OF THE FOODSTUFFS MANUFACTURING INDUSTRY

Year	Value in yen	Year	Value in yen
1930	949,929,039	1935	1,159,491,963
1931	834,687,469	1936	1,245,961,247
1932	886,272,905	1937	1,467,587,385
1933	1,017,580,798	1938	1,752,659,634
1934	1,040,681,846	1939	2,331,900,000

Note: Figures are from the "Factory Statistics" which is compiled on the basis of reports of private factories in Japan proper under the Factory Law, and gives ¥102,362,910 as the amount of production of canned foods in 1938 instead of ¥214,379,000 mentioned above.

Cement

History In 1871, cement works were established by the Government in Fukagawa, Tokyo. This was the origin of the cement industry in Japan. For ten years the works gradually expanded so that by 1891, the total capital invested in the industry was ¥1,000,000, the works numbered ten and the capacity was about 300,000 barrels a year.

In 1898, there were sixteen works with an aggregate capacity of 1,000,000 bbls, and imports were entirely excluded. In 1912, there were nineteen companies and twenty three mills. The total capital invested amounted to ¥18,000,000 while the capacity increased to 4,000,000 bbls.

During the World War, the industry enjoyed unprecedented prosperity and expanded rapidly. New companies were formed and new mills added. At the end of 1926, companies numbered twenty-one with thirty-four mills, the total authorized capital was ¥118,000,000 of which ¥85,000,000 was paid up, and the total production capacity increased to 17,500,000 bbls.

During the last twenty years, demand for cement increased every year with five exceptions, there was a 2% decrease in 1912 and a 10% in 1915 and 1919. The average rate of increase was about 11%. But in 1930, domestic consumption suddenly decreased by 12%, the first time that any such sharp decrease had ever been experienced. The decrease was due to the general depression and the economic retrenchment policy of the Government following the removal of the gold

embargo in January 1930. In 1931, there was a further decrease, but in 1932, with general activity in industry being felt, there was some recovery over the previous two years.

The Industry in Recent Years For some years in the past, the interest of cement industry in Japan centered on the question of the adjustment of over-extended capacity of production. The result is a large curtailment of production.

In 1925 capacity was about 50 per cent larger than the output, which became almost 100 per cent in 1934. In recent years the greatest consumption of cement, including domestic consumption and export, was 480,000 tons in May 1934, while the production capacity at the end of November of the same year was 1,020,000 tons a month. For almost a year 57 per cent of the Cement Associations (Cement Rengokai) capacity has been curtailed.

The cause of this abnormal condition of the industry is found in the fact that in fixing production curtailment ratio of the member companies of the Rengokai, it has been based on the capacities of production of the members. This led the member companies to expand capacities to get larger shares of business. The situation culminated in the latter part of 1934 in forcing the Ministry of Commerce and Industry to apply the Major Industries Control Law to the cement industry. The curtailment ratio in 1939 was 64 per cent.

PRODUCTION OF CEMENT

(Compiled by the Ministry of Commerce and Industry)

Year	Portland Cement		Others		Total value in yen
	Barrels	Value in yen	Barrels	Value in yen	
1931	15,885,398	51,779,580	3,052,971	9,837,362	61,616,942

Year	Portland Cement		Others		Total value in yen
	Barrels	Value in yen	Barrels	Value in yen	
1932	17,215,073	67,782,953	142,599	450,254	68,233,207
1933	21,789,392	84,566,744	153,926	515,065	85,081,809
1934	26,689,637	90,814,136	39,002	1,389,466	92,203,602
1935	30,854,313	99,146,671	706,233	1,693,554	100,840,225
1936	32,375,874	95,591,214	2,085,229	5,706,847	101,298,061
1937	33,215,239	102,552,588	2,879,613	7,546,948	101,099,536
1938	30,492,078	104,243,268	2,497,217	6,717,419	110,950,687

CONSUMPTION OF CEMENT CLASSIFIED BY USES

(In 1,000 metric tons)

Uses	1937	1938	1939	Uses	1937	1938	1939
	Railways	284.7	241.5		182.7	Mining	101.5
Electric works	421.4	510.6	387.3	Retails	1,300.7	1,151.0	1,082.6
Harbors	109.0	97.0	81.3	Cement products	162.1	152.9	211.2
Roads and bridges	239.8	187.4	158.4	Miscellaneous	20.3	27.5	45.4
Other public works	374.6	345.7	392.8	Total	4,163.4	3,884.0	3,684.9
Buildings	1,148.9	1,045.8	1,017.5				

EXPORTS OF CEMENT

(Quantity in metric tons and value in ¥1,000)

Descriptions	1936		1937		1938		1939	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Manchoukuo	3,971	58	222	13	34,354	625	134,829	2,757
Kwantung L. T.	107,198	1,874	13,227	286	45,791	904	188,593	3,341
China	22,550	250	13,249	138	75,659	911	125,275	1,923
Hongkong	54,910	581	15,887	151	9	1	1,239	22
British India	13,497	170	15,558	184	5,380	65	2,680	54
Straits Settlements	90,299	994	81,830	877	34,150	352	34,829	528
Dutch East Indies	48,978	606	84,480	1,044	88,817	1,150	78,044	1,044
Philippines	2,534	35	8,060	102	60,864	658	11,550	146
Others	298,224	3,429	353,795	4,039	146,408	1,749	121,522	1,745
Total	702,164	8,001	586,312	6,836	491,432	6,411	698,565	11,549

1939 Cement Industry The total production of cement in 1939 reached 5,074,454 metric tons decreasing 445,000 metric tons from the previous year, owing mainly to the halt in construction activities due to the State economic control, and the decrease of demand for Japanese cement in foreign markets.

The restoration of peace and order in Chinese areas occupied by the Japa-

nese forces recovered the exports to China amounting to 125,274 metric tons, an increase of 65 per cent as compared with the previous year.

According to the report of the Warehouse Association the amount of stocks of cement which was 216,099 metric tons in December 1938 increased to 248,749 metric tons in January 1939, and decreased to 109,513 at the end of the year.

SUPPLY AND DEMAND OF CEMENT

(Compiled by the Cement Manufacturers' Association)

(In metric tons)

Production Capacity	Shipments to Japan		Production Capacity	Shipments to Japan	
	Clinker	Proper Cement		Clinker	Proper Cement
1934	4,729,994	3,886,870	1937	4,650,393	4,163,462
1935	4,500,362	3,515,224	1938	4,288,564	4,384,022
1936	4,264,475	3,730,192	1939	4,162,600	3,685,900

Year	Exports to Foreign Countries	New Contracts	Outstanding Contracts	Stocks
1935	432,599	4,488,300	675,700	296,000
1936	503,900	4,488,300	797,300	382,400
1937	446,800	4,943,600	1,015,700	316,400
1938	278,400	4,309,600	12,083,200	525,300
1939	237,000	4,751,000	15,284,000	242,800

Note: Figures are confined to the member companies of the Association only.

Ceramics

Pottery making has an old history in Japan. As far back as can be traced in history some potters appear to have had their secret proprietary methods of production. In the Meiji Era, especially after the Russo-Japanese War, along with the advance in industry in general, pottery making was industrialized, a procedure which was thought difficult of accomplishment, and today annual production amounts to from ¥60,000,000 to ¥100,000,000 in value, while exports amount to ¥50,000,000.

The chief places of production are Nagoya and Seto, both in Aichi prefecture, and the eastern part of Gifu prefecture. The quantity produced in these places amounts to about 70% of the country's total production. Seto is so famous for pottery that the Japanese commonly call chinaware "Seto-mono." Besides the products named above "Kutani" ware of Ishikawa prefecture, "Shimizu" ware of Kyoto prefecture, and "Arita" ware of Saga prefecture, are all famous though produced in small quantities only. Nagoya district is one of the largest pottery producing centers in the world.

Pottery was being made, in a crude

form admittedly, at the time of the Emperor Jimmu, the first Emperor of Japan, who lived about 650 B.C. At the time of the Emperor Suinin, that is, 66 A.D., a Korean prince was nationalized, and one of his retainers, who knew the potter's art, was able to give instruction on foreign manufacturing methods. Later, at the time of the Emperor Kammu, i.e., 781 A.D., pottery was imported from China, and the art made further progress.

In 1221 A.D., a man named Kagemasa Kato studied the art of pottery making in China. When he returned, he settled in Seto village, Aichi prefecture, and made chinaware of superior quality, the origin of the present "Seto" ware.

After that, many master artisans arose and tea-things, rice bowls, pitchers, incense burners, etc., now of great rarity and value were produced.

In 1938 total production of chinaware amounted to ¥100,007,896, while there were as many as 6,674 factories and 58,116 employees. The value of total production including tiles and drainage pipes reached ¥131,683,095.

The following table shows how this industry has developed recently.

FACTORIES AND PRODUCTION OF CERAMICS

(Compiled by the Ministry of Commerce and Industry)

Year	Factories	Operatives	Table-ware	Furniture	Building Materials	Insulators	Toys	Total including Others
1931	6,353	40,320	31,926,067	9,388,264	2,304,914	4,154,698	1,103,012	54,197,884
1932	6,474	43,948	25,733,104	11,593,447	2,934,639	4,742,886	2,595,435	65,262,852
1933	6,586	53,292	45,204,776	14,910,054	6,131,345	5,886,047	2,003,566	85,246,500
1934	6,473	57,172	54,001,916	15,573,166	5,876,879	6,166,129	2,981,099	92,363,691
1935	6,624	61,135	54,016,818	15,504,495	6,754,686	9,245,261	3,471,091	99,368,010
1936	6,686	63,955	58,801,046	16,845,708	7,357,239	10,865,483	3,878,602	108,171,711
1937	6,566	62,231	58,791,085	16,161,223	8,859,706	15,155,087	4,015,185	115,191,376
1938	6,674	58,116	42,252,623	12,070,909	11,937,755	16,609,151	2,763,810	100,007,896

Factories and Production of Tiles and Drainage Pipes

(Value in yen)

Year	Tiles			Drainage Pipes		
	Facto- ries	Opera- tives	Total Value	Facto- ries	Opera- tives	Total Value
1931	11,725	38,072	18,345,402	784	2,865	3,814,048
1932	11,445	38,268	18,070,815	827	2,960	3,092,524
1933	11,213	37,628	19,125,574	918	3,310	3,760,772
1934	11,021	38,680	20,740,445	937	3,453	4,228,313
1935	10,809	39,398	21,277,565	944	3,913	4,431,993
1936	10,688	39,576	23,076,803	801	3,593	4,964,409
1937	10,211	35,795	21,571,140	921	4,324	5,510,655
1938	9,407	31,704	22,151,432	838	3,846	6,324,280

Exports of Chinaware Though exports of chinaware amounting to ¥1,300,000 were made as early as 1886, the exports business did not develop to any great extent until the Russo-Japanese War. In 1904, the Nippon Toki Kaisha, Ltd., was organized, to be quickly followed by the Toyo Toki Kaisha, Ltd., and the Nagoya Seito-sho. Each of these companies established large mills with up-to-date equipment and began to produce chinaware on a big scale. Pains-taking studies were made to improve the products and build up an export business, and these, together with other special factors, account for the remarkably large increase in exports. The special factors are:

(1) Japan is able to produce specially thin chinaware that other countries

cannot.

(2) Japanese artisans are especially clever at their work.

(3) The cost of production is reasonable.

Just at the time when the industry was organized on a modern basis, the World War broke out. Pottery works in belligerent countries in Europe were closed down and exports from Japan increased by leaps and bounds. A temporary set-back was experienced when the War ceased, but a recovery was soon made and there was a steady growth until 1929 after which there was a falling off until 1932, when some slight gain was made over the previous year. Exports in 1938 declined on account of the State control of trade.

EXPORTS OF CHINAWARE TO DIFFERENT COUNTRIES

(In ¥1,000)

Countries	1933	1934	1935	1936	1937	1938	1939
Manchoukuo	531,128	1,238	1,222	1,391	2,222	3,821	6,516
China	991	1,387	1,339	1,127	1,145	2,453	5,574
Kwantung L. T.	1,193	2,084	2,162	1,859	2,353	4,643	5,597
British India	3,965	3,204	3,529	3,696	4,240	2,580	2,553
Straits Settlements	900	1,290	763	514	1,174	307	516
Dutch East Indies	3,728	3,269	2,133	2,388	3,109	2,714	2,092
Philippines	959	580	945	1,148	1,431	628	620
Great Britain	1,296	1,161	1,186	1,275	1,171	888	613
Holland	981	761	498	607	542	607	514
U. S. A.	10,180	14,310	15,776	15,530	19,460	8,696	11,115
Canada	1,399	1,508	1,458	2,025	1,038	1,235	1,230
Brazil	370	554	672	461	1,036	576	916
Union of S. Africa	—	—	—	—	1,259	1,009	1,318
Australia	2,707	2,331	2,804	2,291	2,598	2,915	2,264
Others and total	35,634	41,879	43,318	43,548	53,971	40,477	48,624

Domestic Consumption There are no definite figures for the exact amount of domestic consumption, but if we subtract exports from the total production we have an approximate value. Figures shown in the second column of the first table "Factories and Production of Ceramics" give some idea of the amount. Though tile making is growing fast on account of the increase in building of Western style houses, the market had been depressed because of lack of control over production and sales

until 1934 when it began to regain prosperity.

The peculiarity about chinaware intended for domestic use is that it must be made by small factories run on family basis. The reason is that the taste of the Japanese for chinaware is very varied, differing according to each individual as to the form, color, design, etc., thus making it impossible to produce on large scale mass production principles.

Glass and Glass Manufactures

Origin and Development As far as historical record shows, the art of glass manufacturing was developed in the Nara period, that is about 700 A.D. Later, techniques of manufacturing were imported both from the South Sea Islands and China, and put into practice in Osaka, Kyoto and Tokyo, where the industry developed. After the Meiji Restoration, the Government established a model factory to encourage the development of the industry and various attempts were afterwards made to make glass and glassware both by the Government and by individual concerns, but it was not until after the Russo-Japanese War of 1904-1905, that the industry made any great progress.

Glass Tableware Glass tableware was early manufactured in Kagoshima and the old province of Satsuma in Kyushu Island. After the Meiji Restoration it was manufactured by the Shinagawa Shoshi Seizosho (Shinagawa Glass Co.) which was under Government control. At present it is manufactured by the Fukushima Glass Co. organized in 1896, Koidé Shoshi Seizosho (Koidé Glass Co.) established in 1898, Marasa Glass Co., organized in 1918, and the Kawai Shoshi Shokki Seizosho (Kawai Table Glassware Co.) organized in 1920, etc. Production by these and other manufacturers is given below.

Other Glass Articles Glass articles for scientific and medical purposes were manufactured as early as 1850. There are many manufacturers of these articles in Tokyo district.

The manufacturing of eye-glasses was first practised as early as 1600. In 1873, a certain Matsugoro Asakura from Tokyo, went to Austria and learned the art of manufacturing eye-glasses on modern principles. His son and several

others are now manufacturing them.

Red glass was manufactured by the Kagoshima clan prior to the Meiji Restoration, and later by the Shinagawa Shoshi Seizosho, which was under Government control. Also a certain Tokijiro Iwashiro succeeded in manufacturing lenses for the use of searchlights, and light-houses. The right of manufacturing these lenses was later transferred to the Nippon Kogaku Kogyo Kaisha, Ltd. (The Nippon Optical Science Industrial Co., Ltd.). Iwashiro's son later succeeded in manufacturing cut glass.

Glasses for optical work were mostly imported from Germany before the World War, but when the supply was cut off by the war, it was determined that "lenses for optical science must be produced at home at any cost." The Nippon Kogaku Kogyo Kaisha, Ltd., to which all the results of studies made by the naval arsenal were transferred in 1914, and the Osaka Industrial Research Institute, which started research work in 1921, continued investigations. The Osaka Institute succeeded in 1925 in discovering a formula for manufacturing lenses, superior to German makes at reasonable cost. The Nippon Kogaku Kogyo Kaisha, Ltd., also succeeded in finding a way to make these lenses.

Glasses for the chemical industry, that is, hard glasses, are manufactured in several mills in Japan. High grade hard glass which is not in any degree inferior to the best imported is now manufactured by several firms for thermometers, gauges and the chemical industry.

Sheet Glass Though many efforts were previously made to manufacture sheet glass, it was not until 1904 that a Magolchi Shimoda, after two years of experimental manufacture, was successful

in producing a product that could be put on the market.

In 1907, the Asahi Glass Co., Ltd., was organized in Amagasaki, Hyogo prefecture, by the family of the late Baron Yanosuké Iwasaki. An expert and five skilled workmen were brought over from Belgium and commenced to manufacture sheet glass from 1909. The company struggled for 7 years against difficulties in technique and pressure of foreign competition, and in the end succeeded in producing about 120,000 cases a year. In 1914, a patent, which enabled the company to produce sheet glass by a mechanical process was bought from the American Window Glass Co., Ltd., and a factory was established at Makiyama in Tobata, Fukuoka prefecture. On account of the cutting off of imports from

Europe during the World War, the company not only increased production, but exported their products to places far afield as South Africa and London. In 1916, the company established a factory in Tsurumi, Yokohama, and in 1917 another in Yawata, Fukuoka prefecture. In 1923 and 1924, the factories in Makiyama and Tsurumi were extended, and at present the company is capitalized at ¥41,250,000 and has a productive capacity of 846,000,000 sq. feet, besides soda products, calcium chloride, fire brick and Corhart electrocast-brick. Its head office is now at Marunouchi, Tokyo.

At present the Asahi Glass Co., Ltd., the Nippon Sheet Glass Co., Ltd., the Nippon Thick Glass Co., Ltd., and the Tokunaga Sheet Glass Co., Ltd. are manufacturing sheet glasses.

SUPPLY AND DEMAND OF SHEET GLASS

(Unit: Case which contains 100 sq. feet of sheet glass)

Year	Production	Imports	Exports	Domestic Consumption
1930	2,045,611	356,752	57,897	2,344,466
1931	2,220,206	300,023	28,080	2,522,149
1932	2,305,626	247,144	51,204	2,501,566
1933	2,802,555	222,806	137,096	2,888,355
1934	2,897,747	179,476	283,183	2,794,040
1935	3,131,212	94,445	253,727	2,971,930
1936	3,487,096	137,740	251,207	3,373,629
1937	4,192,617	78,417	306,121	3,964,913
1938	2,552,129	10,076	262,217	2,299,988
1939 (estimate)	2,514,228	153	432,262	2,082,119

PRODUCTION OF GLASS AND GLASSWARE

(Compiled by the Ministry of Commerce and Industry)

(Value in ¥1,000)

Year	For Decorative Purposes			For Illuminating Purposes			Bottles
	Table Ware	Beads & Arm Rings	Others	Shades & Globes	Others	Bottles	
1930	2,870	893	859	79	838	244	14,765
1931	2,455	71	570	68	388	944	10,927
1932	4,193	373	683	357	391	733	11,193
1933	4,143	302	696	159	499	1,280	16,845
1934	5,454	469	853	246	471	1,414	20,349
1935	6,631	239	1,030	291	569	1,119	23,716
1936	6,472	423	1,972	227	1,928	754	25,319
1937	7,023	962	1,161	260	1,014	1,089	31,325
1938	6,531	604	1,163	217	798	1,505	42,895

(Quantity in 1,000; Value in ¥1,000)

Year	Sheet Glass Thickness under 2.2 mm.		Sheet Glass Thickness under 4 mm.		Others		Looking Glasses		Others and Total Value
	Quantity Cases	Value	Quantity Cases	Value	Quantity Cases	Value	Quantity Cases	Value	
1930	1,863	12,915	169	2,291	12	220	44	25	40,583
1931	2,104	13,690	99	1,010	16	332	53	128	34,338
1932	1,757	9,908	337	2,137	210	2,124	80	235	37,233
1933	2,039	15,237	427	3,988	335	3,147	74	288	52,526
1934	2,124	15,335	513	4,449	259	3,641	0.450	433	58,857
1935	1,009	7,642	1,770	14,196	350	5,141	0.270	368	68,173
1936	956	6,699	2,161	17,146	369	8,107	76	497	78,360
1937	3,320	27,465	570	7,779	301	5,444	0.560	721	96,375
1938	1,735	22,908	380	7,222	436	6,960	0.107	421	101,970

EXPORTS OF GLASS AND GLASSWARE

(Value in ¥1,000)

Kinds	1937		1938		1939	
	Quantity	Value	Quantity	Value	Quantity	Value
Window glass in 1,000 sq. ft.	27,866	1,560	23,068	1,364	40,396	2,403
Thermos in 1,000 doz.	410	3,131	262	2,138	241	2,607
Glass bottles in 1,000 doz.	36,225	8,030	29,485	7,001	16,555	4,818
Glass cups in 1,000 doz.	8,942	5,064	6,311	3,583	7,488	4,567
Glass tableware in 1,000 doz.	2,238	2,541	1,831	1,571	1,241	1,351
Watch glasses in gross	146	183	148	172	139	159
Glass beads and balls in 100 kin	26,640	1,432	2,130	1,223	1,619	1,305
Looking glasses in 1,000 pcs.	87,896	3,955	66	2,981	57	3,597
Spectacles in 1,000 pcs.	30,792	3,243	18,183	1,657	13,736	1,260
Other glasses and manufactures	—	6,296	—	4,195	—	4,988
Total	—	33,572	—	25,886	—	27,055

IMPORTS OF GLASS

(Value in ¥1,000)

Kinds	1937		1938		1939	
	Quantity	Value	Quantity	Value	Quantity	Value
Uncolored plate glass under 2.2 mm. in 1,000 sq. m.	590	584	54.8	71	0.1	0
Uncolored plate glass under 4 mm. in 1,000 sq. m.	18	197	7.7	32	0.5	4
Other uncolored plate glass in 1,000 sq. m.	46	609	14.6	566	1.3	96
Other plate glass in 1,000 sq. m.	72	292	16.4	71	0.1	28
Plate glass having inlaid metal wire or net in 1,000 sq. m.	19	133	2.1	18	—	—
Dry plates for photography in 100 kin	4	491	2	—	—	—
Others	—	1,770	—	1,723	—	1,259
Total	—	3,989	—	2,501	—	1,387

Matches

The industry in the past A factory for making matches was first established in Japan, in Tokyo, in April 1875, by a certain Makoto Shimizu, who had just returned from studying the subject in a French technical school

and a match factory managed by the French Government. In the same year a factory was established in Osaka, and in 1877 another was established in Kobé. In 1878, three years after the first factory was established, matches to the

value of ¥24,000 were exported, and in succession factories were established in Shizuoka, Aichi, Osaka and Hyogo prefectures. By 1889, not only had the importation of matches ceased, but large quantities, in face of strong foreign competition, were being exported to China. In 1887, Hyogo-ken Match Seizogyo Kumiai (Association of Manufacturers of Matches in Hyogo prefecture) was formed and in 1900 the Dogyo Kumiai (Association of Traders in Matches) was organized. The industry experienced great prosperity during the Russo-Japanese War, exports being made not only to China but also to the South Sea Islands, Straits Settlements and India. But from about that time the match industry began to develop in China and by 1908 it had developed to the extent that the market in China was considerably curtailed for the Japanese product, then when India raised her tariff on matches, and the Dutch East Indies imposed a consumption tax on them, exports of matches to countries in the Orient were considerably reduced. Exports for some time became almost negligibly small but in 1933, they suddenly increased to ¥3,248,000 from about ¥938,000 in 1932.

The development of the match industry during the World War was such as to make the industry a menace to the International Match Company. This company, therefore, commenced negotiations with and was successful in amalgamating the Nippon Match Manufacturing Co., Ltd., which was one of the Mitsui interests, and the Nippon Match Co., came under foreign management for three years, that is, until 1927, when the largest match manufacturer in Japan, the Toyo Match Co., Ltd., seeing the advantages which would accrue from cooperation with the International Match Company agreed to amalgamation. The Daido Match Co., Ltd. was organized with a capital equally subscribed by

Japan and Sweden, and the management was placed in Japanese hands, avoiding in this way competition in foreign markets.

Exports increased along with the development of the industry and as far back as 1913 Japan's match exports totalled some ¥12,000,000 after meeting the domestic demand. During the World War annual exports were between ¥30,000,000 and ¥40,000,000, forming one of the big ten export items of Japan.

Due to the rising importance of Soviet matches in international trade, Japan's shipments to the United States have fallen almost to the vanishing point.

When the Japanese match industry was influenced by Swedish interests the export field was limited to China and part of the South Seas. America, Australia, the Near East, Africa and Europe was monopolized by Swedish interests. After Kreuger's downfall Japanese match exporters took back their old markets. In 1936, the Japan Match Manufacturing and Trading Company was established by the amalgamation of several companies, and the industry and trade in matches became unified.

EXPORTS OF MATCHES

(Value in yen)

	1938	1939
China	2,053,000	2,434,000
Kwantung L. T.	638,000	630,000
Other countries	613,000	1,551,000
Total value	3,304,000	4,616,000
Total quantity in gross	519,000	614,000

Number of Factories The number of match factories in Japan was 153 with 8,110 operatives at the end of 1938.

Production of matches and allied articles in recent years has been as follows:

PRODUCTION OF MATCHES, ETC.

Year	Quantity Produced Gross	Value (In yen)	Match-boxes Matchwood (Value in yen)	
			Match-boxes	Matchwood
1930	16,722,653	7,464,081	645,765	600,047
1931	13,535,353	6,686,245	457,067	701,334
1932	18,234,683	7,306,721	764,905	613,939
1933	20,711,239	9,202,221	1,169,029	710,525
1934	20,597,615	10,033,567	550,947	616,915
1935	27,369,618	12,659,929	607,979	742,767
1936	21,874,973	11,824,397	831,624	1,572,439
1937	23,969,588	12,544,564	807,520	1,576,001
1938	22,869,636	13,303,408	849,920	2,293,793

Lacquer-ware

Industry Inherent Japan is the only country in the world enjoying world-wide renown in the technical art of lacquer-ware manufacture. The various industrial arts of Japan such as the porcelanic and weaving owe their origin to China or Western countries, but as regards lacquer, Japan acknowledges no teacher. From remote antiquity, especially in the technique of relief lacquer, the art has developed without aid from any foreign methods of manufacture or materials. For more than two thousand years the craftsmen of Japan, having striven to improve, finally attained a degree of wonderful skill. The production of lacquer-ware is confined to Oriental countries only.—Japan, China, Korea and India,—where lacquer juice, known as urushi, is obtainable, although there is an evident tendency in Western countries in recent years to manufacture lacquer-ware of industrial art value. The application of mother of pearl, known as nacre work, became common during the Nara period. A large number of ancient examples of lacquer-ware that have served as models for succeeding generations are still kept in the Shosoin, the Imperial Treasure House in Nara. These represent products of the Tempyo era, when even large wooden buildings were lacquered. Among such buildings left standing are the Chuson Temple in Iwate prefecture and the Byodoin Temple in Kyoto prefecture. Embossed lacquer-ware was invented during the Kamakura Age, when tasteful designs of chrysanthemums and other flowers were in vogue.

From Toyotomi Downward A golden mother of pearl inkstone case in embossed lacquer with a chrysanthemum design is now treasured in the Hachiman Shrine at Kamakura. The pomp and glory of the third Ashikaga Shogun stimulated the art and resulted in the perfecting of embossed lacquer work and the extension of its application to articles of daily necessity. Hideyoshi Toyotomi accomplished his gigantic task

of pacifying the country. Grandeur was a unique feature of his administrative policy and social and other life in those days. The grand Momoyama style, named after his palace, reflected on the industrial arts. Koetsu relief lacquer was supreme and Kodaiji relief lacquer was also produced, representative lacquer products of those days. When the third Tokugawa Shogun, Iyemitsu, came into power, he erected the great Nikko mausoleum and Zojoji Temple at Shiba, Tokyo for his grandfather and father respectively, and lacquer was amply applied to these buildings. During the reign of the fifth Shogun, Tsunayoshi, an exquisite technique attained its zenith, defying all the imitative powers of succeeding generations. It was applied to scabbards of swords, miniature medicine-cases (known as Inro) and various articles used by the Daimyo. Notable lacquerers such as Koami Choju, Koma Ikyu, Ogata Korin and others flourished during this period. Since that time the production of lacquer has spread to various localities throughout the country, and unique local color has been freely introduced into the design. Competition ensued as in all industrial articles, and some of the products of those days were exported abroad. Japanese industrial arts were almost wholly neglected during several years following the Meiji Restoration. Lacquered articles of artistic value were sold at ridiculously low prices and these were purchased by foreigners who had eyes for their value and who took them to their own countries. This provided an opportunity to introduce the Japanese lacquer art to foreign countries, but at the same time Japan lost many articles of both aesthetic and monetary value. (Information on the industrial art are given in the Japan Year Book, 1939-40, pp. 546, 547.)

Production

Production of lacquer-ware in recent years was as follows:

FACTORIES AND PRODUCTION OF LACQUER-WARE

	Factories Operatives		Tableware	Furniture	Others (In yen)	Total
	Factories	Operatives				
1932	10,267	28,794	10,851,938	6,918,301	8,862,670	26,632,909
1933	10,784	30,431	12,139,600	8,012,675	9,419,390	29,571,665
1934	12,223	37,641	13,366,815	9,437,231	13,507,713	36,311,759

	Factories	Operatives	Tableware	Furniture	Others	Total
				(In yen)		
1935	11,170	36,217	14,189,283	9,983,004	14,227,619	38,399,906
1936	12,727	39,599	16,869,770	10,659,162	15,031,075	42,560,007
1937	11,874	35,093	18,106,008	12,106,268	13,801,216	44,013,492
1938	11,670	34,813	16,452,159	12,450,203	17,180,686	46,083,048

VALUE OF EXPORTS OF LACQUER-WARE

(In ¥1,000)

Year	Value	Year	Value
1932	1,195	1936	2,098
1933	2,371	1937	2,395
1934	2,570	1938	1,444
1935	2,513	1939	1,562

Tobacco

The tobacco industry and wholesale business in Japan are monopolized by the Government by virtue of the Manufactured Tobacco Monopoly Law of 1904 and the regulations issued in 1931. The imports of manufactured tobacco gradually decreased in recent years to

be entirely stopped in 1939. The production of the Monopoly Bureau factories barely supplies the domestic demand. The trade and production of various kinds of tobacco in recent years was as follows:

PRODUCTION OF TOBACCO

(Monopoly Bureau, Finance Ministry)

(Unit: 1,000 pieces)

	1936	1937	1938
Cigarettes, mouthed	10,987,371	10,473,230	10,338,141
Cigarettes, without mouthpiece	28,806,713	30,107,355	31,599,960
Cigars	1,627	1,223	739,120
Cut tobacco in kilogram	21,198,772	21,601,591	20,178,924
Pipe tobacco in kilogram	9,485	6,565	3,635

EXPORTS AND IMPORTS OF TOBACCO

(In ¥1,000)

	Exports	Imports	Exports	Imports
1937	4,407	6,593	1939	693
1938	5,974	3,359		

Production of Other Industries

There are innumerable industries figures for which it will not be possible to give in this volume. Only the important industries, together with total production figures are given below. Sources used are the "Factory Statistics" published by the Statistics Section, the Secretariat for the Minister of Commerce and Industry, and the "Statistics for Commerce and Industry" published by the same office.

PRODUCTION OF METALLIC INDUSTRY

Value in ¥1,000

	1936	1937	1938
Metal refining & material	1,488,916	2,416,700	3,171,407
Casting:			
Pig-iron	112,855	205,962	333,999
Cast steel	23,650	50,194	91,018

PRODUCTION OF WOOD-WORKS

Value in ¥1,000

	1936	1937	1938
Other cast metals	20,614	36,471	69,216
Total	167,538	306,565	516,948
Bolt, nut, washer	21,095	39,123	57,314
Rivet	5,964	11,186	12,961
Nail	21,368	33,306	37,024
(Iron nail)	(15,522)	(25,977)	(25,104)
Needle	3,491	3,965	4,379
Chain	4,850	6,272	11,193
Rope	16,367	23,321	31,334
Wire	7,190	11,503	19,848
Wire-netting	5,771	7,938	9,930
Tin-plate manufactures	90,607	134,313	180,065
(can)	(53,739)	(69,699)	(88,268)
Iron furniture	23,424	28,885	28,908
Building materials	63,725	82,541	80,906
Copper and bronze wares	710	1,103	284
Aluminum wares	15,030	15,625	22,701
Button	2,060	2,806	2,693
Pen nibs	3,482	4,102	4,019
(Fountain-pen nibs)	(2,641)	(2,929)	(2,228)
Razor	857	974	1,430
Table knife, fork, spoon	2,011	2,428	2,743
Toy	3,710	6,188	3,762
Total including others	353,079	491,794	615,728
Plated articles	121,187	163,546	159,284
Grand Total	2,130,719	3,376,275	4,463,368

PRODUCTION OF BRICKS AND OTHER FIRE-PROOF ARTICLES

Value in ¥1,000

	1936	1937	1938
Bricks	3,329	3,916	5,034
Bricks, fire-proof	19,327	26,278	49,549
Other fire-proof articles	4,889	6,989	9,634
Total	27,545	37,183	64,218

PRODUCTION OF THE KILN INDUSTRY

(Not mentioned elsewhere)

Value in ¥1,000

	1936	1937	1938
Cement manufactures			
Tiles	811	778	1,327
Pipes	4,000	5,617	8,823
Slates	6,671	12,067	10,951
Others	2,378	3,628	5,308
Total	13,861	22,091	26,409
Lime	8,498	13,672	14,842
Enamelled ironwares	17,970	21,841	21,719

Paper goods:

	1936	1937	1938
Boxes	14,005	15,608	21,703
Tags	912	940	1,169
Toys	492	925	758
Fans (Sensu)	96	193	129
Fans (Uchiwa)	541	649	682
Lanterns	552	619	682
Note-books	5,415	4,492	7,799
Total including others	58,092	75,456	95,263
Bamboo goods:			
Baskets	9,574	9,935	10,280
Blinds (Sudaré)	1,327	1,247	1,311
Total including others	11,297	11,628	12,038
Wicker goods (Yanagi-gōri)	3,657	3,469	3,570
Cane-work (Cane table and chair)	2,680	2,574	2,474
Mat (Tatami omoté)	2,439	2,427	2,124
Mat (Goza and Hanamushiro)	1,345	1,358	1,114
Straw, chip and other braids	14,705	17,176	21,037
Leather	9,223	11,524	18,427
	5,101	7,936	6,046
	45,945	68,883	102,270

EARNINGS OF PRINTING HOUSES

Amount in ¥1,000

Year	Amount
1936	225,705
1937	258,519
1938	264,836

PRODUCTION OF MISCELLANEOUS INDUSTRIES

(Not mentioned elsewhere)

Value in ¥1,000

MISCELLANEOUS INDUSTRIES

	1936	1937	1938		1936	1937	1938
Leather goods				Imitation			
Shoes	27,474	29,742	25,215	panama	498	764	665
Bags	4,082	4,820	3,343	Total including			
Saddlery	1,863	2,935	6,216	others	22,469	27,148	19,326
Belt	5,233	5,097	6,362	Waterproof cloth	3,622	11,229	20,360
Small bags	2,530	2,504	3,695	Rubber cloth	4,030	3,703	14,175
Total	41,784	45,101	44,834	Imitation leather			
Button (shell,				cloth	6,526	7,678	10,690
ivory, bone)	5,257	7,449	7,509	Fabric materials			
Imitation pearl	1,343	807	688	for medical			
Brushes	6,511	7,500	8,119	treatment	8,908	13,654	23,492
(Tooth brush)	3,245	4,297	4,946	Asbestine articles	9,587	12,080	23,261
Rope (fibrous)	35,122	48,514	50,759	Metallic foil	9,159	9,213	6,462
Foreign style				(Gold-foil)	(1,457	566	579)
clothes	29,501	33,994	41,303	Writing brush			
Underwears	11,552	19,596	20,269	(Fudé)	164	237	603
Japanese socks	42,698	54,675	54,474	Fountainpen	3,081	2,926	4,190
Handkerchief	508	1,247	924	Pencil	4,631	5,430	5,613
Hat:				Crayon	1,318	1,324	1,489
Felt	16,853	19,862	13,040	Paper umbrella	240	1,504	844
Straw	1,484	1,369	1,083	Umbrella	288	652	1,001
				Imitation flower	120	200	291
				Stone goods	5,214	5,819	3,399

EARNINGS BY WORKERS IN FINISHING, MENDING, ETC.

(Unit: ¥1,000)

For	1936	1937	1938
Spinning and weaving industry	279,789	321,399	338,466
Metallic industry	21,560	34,216	57,231
Machinery industry	95,245	123,257	222,854
Kiln industry	4,412	8,760	5,667
Chemical industry	5,651	9,218	12,392
Wood work	11,992	11,463	12,483
Printing and binding	6,236	7,341	10,684
Foodstuff industry	2,449	3,747	6,741
Miscellaneous industry	21,790	28,848	57,268
Total	449,128	548,254	723,790

CHAPTER XXIII

COMMUNICATIONS

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CHAPTER XXIII

COMMUNICATIONS

General

The communications of the country are supervised by the Minister of Communications and a special account is established for the management of this business, beginning with the fiscal year 1934-1935. General condition of the business in Japan proper in 1938-1939 may be obtained from the following:

Post, telegraph and telephone officials and operatives (Sept. 30, 1939)	183,804
Post, telegraph and telephone offices (Sept. 30, 1939)	15,707
Ordinary mail routes (Mar. 31, 1939) in km.	100,722
Ordinary mails accepted (1938-39)	4,844,384,134
Ordinary mails delivered (1938-39)	4,315,098,400
Parcel post routes (Mar. 31, 1935) in km.	85,385
Parcels accepted (1938-39)	77,848,661

Parcels delivered (1938-39)	90,459,389
Telegraph routes (Mar. 31, 1939) in km.	49,293
Telegraph lines (Mar. 31, 1939) in km.	374,452
Telegraphs dispatched (1938-39)	94,991,985
Telegraphs received (1938-39)	100,629,605
Telephone subscribers (Sept. 30, 1939)	1,006,498
Telephone routes (Mar. 31, 1939) in km.	87,175
Telephone lines (Mar. 31, 1939) in km.	7,843,658
Telephones (1937-38)	1,549,131
Telephone messages (1938-39)	4,976,321,936
Income from postage (1937-38)	92,261,160
(1938-39)	90,550,850
Business expenditure (1937-38)	322,951,846
(1938-39)	366,366,399

Postal Service

Historical Survey

The present state postal service system was established in 1871, between Tokyo and Osaka. In August of that year, post offices were opened in Niigata, Hakodate, Kobe, Nagasaki, and Yokohama. In December a new postal route was established between Tokyo and Nagasaki, connecting the two cities in 7 days and 17 hours. In May 1872, the postal service between Yokohama and Tokyo was greatly improved by the establishment of five deliveries a day, and by July the service was extended to all the cities and towns of importance throughout the country, except a part of Hokkaido.

Foreign Mail Opens In March 1872, a foreign mail service was opened at the same time as the establishment of official postal regulations. In those days, foreign mail matter in Japan was handled with the aid of the British, American and French post offices in Yokohama, Kobe and Nagasaki. Soon after

the conclusion of the America-Japan Mail Service Treaty in 1873, the American post offices were withdrawn from this country, and Japan was thus placed on an equal footing with the U.S.A. as regards the mail service between the two countries. In 1877, an arrangement was made with twenty-five countries participating in the International Mail Service Treaty. Thereupon, the British and the French post offices were also withdrawn from this country.

The post offices were at first classified into five grades, and in March 1886, they were classified into three as at present. In view of the development of telephone and telegraph business, the authorities introduced a revision in the system of the Communications Ministry in 1903, and divided post offices into post, telegraph, and telephone offices each of them being classified into 1st, 2nd and 3rd, or 1st and 2nd in the case of telephone offices. With the rapid increase in the amount of mail matter and

telephone and telegraphic messages, the regulations of the Communications Ministry as to the number and kind of offices, were extended from time to time, and at present there are offices in warships, steamers, trains, etc., in addition to the network throughout the country.

The air mail service was commenced in 1929 with the establishment of the Japan Air Transport Company in April of the same year.

The Growth The rapid growth of the postal service in the early years is illustrated by the following statistics:

Year	No. of P.O.
1871	180
1872	1,160
1874	1,501
1874	3,245
1882	5,527

Following the introduction of a revision in the postal service regulations in 1883, some of the offices were eliminated, the number being reduced to 4,088 by the end of 1889. But the steady development of postal business necessitated an increasing number of offices as the following figures for Japan proper show:

On March 31 of	No. of P.O.
1930	9,690
1931	9,954
1932	10,203
1933	10,322
1934	10,611
1935	10,891
1936	11,253
1937	11,669
1938	12,138
1939 (Dec. 1)	12,803

Post offices had been classified into three grades, namely 1st, 2nd and 3rd, the 1st being, side-by-side with 2nd and 3rd offices, in such important places as

Tokyo, Osaka, and other leading cities, and the 2nd and 3rd in smaller cities, towns and villages throughout the country. But the classification was abolished as from February 1, 1941, in order to eliminate misunderstandings as regards the importance or nature of businesses handled in different post offices where no such distinction now exist.

Its Business

In addition to ordinary matters relating to post and telegrams, the post offices in Japan receive taxes on behalf of the various tax authorities and pay pensions, annuities, etc. on behalf of the Treasury. Since 1906, New Year's greeting cards have been handled separately from ordinary mail matter with a view to relieving congestion. Such mail matter is accepted by all post offices from December 15 to 29 for delivery on New Year's day.

Ordinary mail matter is delivered 5 or 6 times daily in Tokyo, Osaka, and Kyoto, and 4 or 5 times in other large cities, where there are 1st class offices. In smaller cities, the 2nd class offices deliver 3 or 4 times a day. In towns and villages where they have 3rd class offices, mail matter is delivered twice a day only. The number of collections is the same as that of delivery in most cases.

The parcel post service was started in 1892, the first arrangement as regards foreign connections being made with Hongkong in 1879. The scope of international service was gradually extended, and covers almost all treaty countries at present.

Statistical Tables The following tables indicate the volume of business, handled by the post offices, and the increase in the amount of their work:

NUMBER OF POST OFFICES (September 30, 1939)

	Japan Proper	Taiwan	Karafuto	Chosen	Kwantung Leased Territory	Islands
1st Class	113	12	—	—	—	—
2nd Class	275	11	5	121	—	—
3rd Class	11,543	171	85	—	23	11
Minor offices	872	—	—	31	80	—
Total	12,803	194	90	152	103	11

VOLUME OF MAIL MATTER HANDLED IN JAPAN PROPER

	Ordinary Mail	Parcel Post	Total	Percentage of Increase
1930-1931:				
Despatched	4,409,551,651	60,067,753	4,469,619,404	(-)0.02
Received	4,437,939,812	57,724,887	4,495,664,693	0.18
1931-1932:				
Despatched	4,409,202,875	58,201,931	4,584,404,806	1.08
Received	4,532,477,443	55,654,599	4,588,132,042	(-)1.35
1932-1933:				
Despatched	4,253,259,031	58,472,313	4,312,231,344	(-)0.36
Received	4,294,100,596	54,849,774	4,348,950,370	0.34
1933-1934:				
Despatched	4,357,325,600	61,240,342	4,418,565,942	0.25
Received	4,402,200,835	57,762,972	4,459,963,807	0.26
1934-1935:				
Despatched	4,674,986,977	65,073,439	4,740,060,406	0.73
Received	4,772,868,449	61,847,673	4,834,716,122	0.84
1935-1936:				
Despatched	4,735,348,007	68,291,938	4,803,639,947	0.13
Received	4,901,685,581	64,854,932	4,966,540,513	0.27
1936-1937:				
Despatched	4,842,938,022	72,593,332	4,915,531,354	2.32
Received	4,934,414,563	68,185,892	5,002,600,455	0.72
1937-1938:				
Despatched	4,763,778,174	80,529,155	4,844,307,329	(-)1.44
Received	5,032,459,307	72,614,786	5,105,274,093	2.05
1938-1939:				
Despatched	4,315,098,400	90,459,389	4,405,557,789	(-)0.91
Received	4,844,384,134	77,848,661	4,922,232,795	(-)0.36

VOLUME OF MAIL MATTER HANDLED DURING 1938-39 IN THE EMPIRE

	Japan Proper	Taiwan	Karafuto	Chosen	Kwantung Leased Territory	South Sea Mandated Islands
Ordinary mail						
Domestic mail						
Despatched	4,192,061,924	101,091,607	24,156,172	350,138,036	48,553,981	2,386,336
Collection post	6,461,435	463,570	10,702	504,277	16,111	2
Received	4,737,238,448	81,051,579	31,804,800	384,345,435	54,286,382	4,038,250
Collection post	—	321,967	58,385	734,652	41,024	1,001
Foreign mail						
Despatched	113,036,476	619,423	257,633	312,669	291,120	9,809
Received	107,145,686	784,131	267,410	990,528	421,920	12,611
Parcel post						
Domestic						
Despatched	87,548,897	1,368,906	307,624	3,251,131	517,704	27,247
Received	77,263,106	835,639	721,500	4,627,351	612,964	86,748
Foreign						
Despatched	2,910,492	4,881	6,789	7,595	790	44
Received	585,555	19,524	414	4,988	16,083	48
Total						
Despatched	4,405,557,789	103,084,817	24,728,218	353,709,431	49,363,595	2,423,436

	Japan Proper	Taiwan	Karafuto	Chosen	Kwantung South Sea Leased Territory Islands	Mandated
Collection post	6,461,435	463,570	10,702	504,277	16,111	2
Received	4,922,232,795	87,690,873	32,794,124	289,968,302	55,337,349	4,137,057
Collection post	—	321,967	58,385	734,652	41,024	1,001

Postal Money Order can hardly be included into the business of communications. It is, however, one of the important lines of business handled by the post office for the convenience of the large mass of people. The number and amount of postal money orders handled during 1938-39 are given below:

POSTAL MONEY ORDERS IN 1938-39

Territory	DOMESTIC		FOREIGN	
	No. Issued	Amount (In yen)	No. Paid	Amount (In yen)
Japan Proper	45,379,728	1,023,237,511	47,259,892	1,079,573,474
Taiwan	1,362,037	42,545,027	796,453	27,061,209
Karafuto	653,637	24,366,044	318,604	13,652,238
Chosen	5,172,108	180,011,212	4,424,808	158,173,112
Kwantung Leased Territory	505,734	13,749,678	189,187	6,134,532
South Sea Mandated Islands	131,323	12,343,221	24,782	8,037,242
Japan Proper	403,237	16,284,511	2,380,747	78,786,037
Taiwan	19,499	735,664	8,744	335,665
Karafuto	2,075	89,173	8,198	508,248
Chosen	128,570	6,366,407	395,751	15,831,261
Kwantung Leased Territory	57,528	2,014,656	233,122	7,540,149
South Sea Mandated Islands	136	9,112	183	11,960

The number of postal money orders issued in Japan proper has been constantly on the increase since 1875 when the business was first opened while the amount reached its highest mark in 1926 and continued to decrease for 5 years until it began to regain the upward tendency in 1933.

POSTAL MONEY ORDERS IN JAPAN PROPER

Fiscal year	Number	Increase (In percentage)	Amount (In yen)	Increase (In percentage)
1934-35:				
Issued	35,371,607	0.60	723,592,083	0.58
Paid	37,539,575	0.62	784,338,121	0.66
1935-36:				
Issued	36,926,278	0.44	751,734,983	0.39
Paid	39,348,351	0.48	817,399,466	0.42
1936-37:				
Issued	38,146,546	0.33	786,476,088	0.46
Paid	40,591,334	0.29	850,615,079	0.53
1937-38:				
Issued	40,496,288	0.61	863,746,668	0.98
Paid	42,718,148	0.52	926,219,020	0.88
1938-39:				
Issued	45,379,728	1.21	1,023,237,511	1.85
Paid	47,259,892	1.06	1,079,573,474	1.66

1939-40 Money Order According to a tentative report of the Communications Ministry the number and amount of the money orders handled in the Empire during the fiscal year 1939-40 were as follows:

MONEY ORDER IN 1939-40		
Domestic Money Orders	Number	Amount in Yen
Issued	59,525,857	1,644,945,857

Domestic Money Orders	Number	Amount in Yen
Paid	56,327,293	1,554,449,109
Foreign Money Orders		
Issued	806,130	27,445,881
Paid	4,420,728	191,040,811
Total Issued	60,331,987	1,672,391,738
Paid	60,748,021	1,745,489,920

Telegraph Service

Telegraph service in Japan was started in August 1869, but this was for Governmental messages exclusively. Public telegraph service was started in September of the same year between Tokyo and Yokohama. Telegrams in European languages were despatched for the first time in April 1870. In August of the same year Osaka and Kobe began to exchange telegraph messages. In June 1871 the laying of the submarine cable between Nagasaki and Shanghai was completed. In February 1873,

aerial lines connected Tokyo and Nagasaki and telegraph service for districts along the lines was opened. In January 1879, Japan entered the international telegraph association. With revisions of rules and laws in subsequent years the business was started on a fair and steady road of progress. Wireless telegraph service was installed in 1908, and telegraphic picture transmission was undertaken from August 1930.

Statistics on the telegraph services follow:

TELEGRAPH STATIONS IN JAPAN PROPER

Year	Number	Increase in the Year	Year	Number	Increase in the Year
1930-1931	7,631	620	1935-1936	8,951	756
1931-1932	7,813	78	1936-1937	9,678	727
1932-1933	7,813	104	1937-1938	11,469	1,791
1933-1934	7,942	129	1938-1939	12,735	1,266
1934-1935	8,215	273	1939-1940	13,648	914

NUMBER OF TELEGRAPH OFFICES, SEPTEMBER 30, 1939

	Japan Proper	Taiwan	Karafuto	Chosen	China	Kwantung South Sea Leased Territory Islands
1st class	8				3	15
Wireless	—				—	—
2nd class	47	4	2	11	—	1
Wireless	Land 22	w.3	w.2	w.11	—	—
S.S.	21				—	—
Post & telegraph offices	10,745	185	89	837	—	21
Minor offices	2,425	38	32	162	—	90
Wireless	Land 16	3	—	21	—	66
S.S.	1,080	8	—	—	—	—
Air	3	—	—	—	—	—
Total	13,648	227	123	1,010	3	126

TELEGRAMS HANDLED IN 1938-1939

	Domestic Messages	Foreign Messages
Japan Proper (Japan—Manchuria included)	75,838,875	1,261,295
Despatched	81,758,927	1,264,133
Delivered		

		Domestic Messages	Foreign Messages
Taiwan	Despatched	2,076,497	25,756
	Delivered	2,159,409	38,016
Karafuto	Despatched	1,264,498	496
	Delivered	1,214,208	670
Chosen	Despatched	11,698,936	11,639
	Delivered	11,473,128	14,204
P. O. in China	Despatched	95,996	234,394
	Delivered	107,056	218,990
Kwantung Leased Territory	Despatched	1,813,222	238,037
	Delivered	1,793,760	240,692
South Sea Islands	Despatched	429,952	2,392
	Delivered	345,146	1,266

YEARLY COMPARISON OF NUMBERS OF TELEGRAMS HANDLED

((1932-1938))

	Domestic	Foreign	Total	Increase or Decrease in %
1932-33:				
Despatch	54,065,046	1,254,430	55,319,476	de 0.24
Arrival	56,281,163	1,243,925	57,525,088	de 0.25
1933-34:				
Despatch	56,529,921	1,237,193	57,767,114	in 0.44
Arrival	58,843,016	1,242,847	60,085,863	in 0.45
1934-35:				
Despatch	59,173,906	1,262,539	60,436,445	in 0.46
Arrival	61,591,759	1,272,011	62,863,770	in 0.46
1935-36:				
Despatch	62,433,347	1,321,910	63,755,257	in 0.55
Arrival	65,544,777	1,329,789	66,874,566	in 0.64
1936-37:				
Despatch	64,842,865	1,475,353	66,318,218	in 0.40
Arrival	68,521,989	1,448,560	69,970,549	in 0.46
1937-38:				
Despatch	72,629,960	1,434,325	74,064,285	in 1.18
Arrival	77,583,878	1,407,762	78,991,640	in 1.28
1938-39:				
Despatch	93,217,976	1,774,009	94,991,985	in 2.83
Arrival	98,851,634	1,777,971	100,629,605	in 2.74

LENGTH OF INLAND TELEGRAPH LINES

March 31, 1939		As compared with the previous year		Km.		As compared with the previous year	
Land lines	Km.			Land lines			
Aerial lines, routes	32,913	- 446		Cores	28,450	- 267	
" " lines	226,400	-1,662		Underground lines			
Overhead cables				Routes	789	- 2	
Routes	142	+ 18		Cores	99,720	+ 325	
				Submarine cables			
				Lines	15,449	+ 14	
				Cores	19,882	+ 13	

PNEUMATIC TUBES

March 31, 1938

	Meter	As compared with the previous year
Length of routes	78,657	+ 9,067
Length of tubes	159,568	+18,359

FREQUENCIES AND HOURS OF FAULTS OF INLAND TELEGRAPH

1937-1938

Land and underground lines:		
Contacts:		
Frequency		3,990
Hour		18,392
Earth:		
Frequency		3,859
Hour		20,184
Disconnection:		
Frequency		3,273
Hour		11,385
Leakage:		
Frequency		382
Hour		4,040
Others:		
Frequency		1,480
Hour		2,191
Total:		
Frequency		12,984
Hour		56,192
As compared with the previous year:		
Frequency	+ 188	
Hour	+ 627	
Submarine cables:		
Frequency		72
Hour		124,772
As compared with the previous year:		
Frequency	- 29	
Hour	+ 47,743	

TELEGRAPHIC APPARATUSES

1937-38

Telephones for telegraph service	8,622
Ink writers	2
Sounders	5,918
Automatic telegraphs, duplex	178
Undulator and siphon recorders	17
Printing duplex telegraphs	84
Phototelegraphs	5
Telegraph repeaters	183
Portable telegraphs	24
Automatic telegraph repeaters	2
Simple exchange machines	2
Total	15,037

Wireless Telegraph Service

The study of wireless telegraphy was begun in Japan in 1896, or one year after the invention of wireless telegraphy by Marquis Marconi. In 1903, an experiment was made between Nagasaki and Taiwan by the Communications Ministry with satisfactory results.

The First Station In November 1906, Japan sent a delegation to Berlin to represent her at the First World Conference on Wireless Telegraphy. In May 1908, the first land wireless telegraph station was established in Choshi, (Chiba prefecture), whilst the first marine wireless telegraph equipment was set up on the Toyo Kisen liner "Tenyo Maru" in the same year. In July 1908 wireless telegraph stations were established at Ohsézaki in Nagasaki prefecture, Shionomisaki in Wakayama prefecture and Tsunojima in Yamaguchi prefecture. In December 1908, a wireless telegraph station was established at Otchishi in Hokkaido. At the same time sets were installed on some of our ocean liners. Japan was thus placed on a more or less secure foundation in the sphere of wireless telegraphy.

The circulation of regulations for private wireless telegraph offices in October 1915, greatly facilitated the healthy growth of the business, and the service was extended to wider areas. It was utilized for steamship communication, and contact was also made with steamers and between ships and land stations, and also between aeroplanes and steamers or stations on land. With the enforcement of a law for the establishment of wireless sets on steamers, the number of stations rapidly increased.

International Communication The extension of wireless communication with other countries started in Japan in 1915, when messages were exchanged between Otchishi station and Petropavlosk in Kamchatka. In 1916, the Funabashi station succeeded in exchanging messages with Hawaii. In 1920, the Iwaki station was established for handling messages between Japan and America. In 1925, the Government issued a law establishing the Japan Wireless Telegraph Company with a capital of ¥20,000,000, with a view to becoming absolutely independent of foreign telegraph companies, with whose co-operation Japan had been exchanging wireless messages with all other countries, except America, Russia, and China.

The Government transferred to the Company its Iwaki radio plant and the ground at Yosami and Yokkaichi which it was holding with the intention of erecting radio stations for the services with countries in Europe.

The Company was reorganized in March 1938 and assumed the name of the International Tele-Communication Company, increasing its capital to ¥25,000,000 and absorbing the International Telephone Company.

The Company has, according to the Law, to equip and manage the facilities and then rent them to the Ministry of Communications in consideration of a subsidy. Although many improvements were introduced at considerable outlay over all former installations of Iwaki radio plant by the Company, the advent of short-wave methods compelled it to close the stations upon the completion of its new stations at Oyama and Fukuoka.

The Company's circuits now offer from Nagoya direct communication service with England, France, Germany, Italy, Switzerland, Poland, Holland, Mexico and Brazil; and from Tokyo the circuits reach out to North and South America, Hawaii, the Philippines, French Indo-China, Thai, Dutch Indies, British India, and Syria. The Company has an extensive plan of development which will in future place Japan in direct touch with all the important countries of the world.

The Company now places the following stations in daily twenty-four hour service:

(a) Transmitting station at Oyama, near Tokyo.

Receiving station at Fukuoka, near Tokyo.

(b) Transmitting station at Yosami, near Nagoya.

Receiving station at Yokkaichi, near Nagoya.

Stations (a) are used for direct communication with San Francisco, Buenos Aires, Honolulu, Manila, Saigon, Bangkok, Bandoeng (Java), Bombay and Beirut (Syria); and, stations (b) for direct communication with London, Paris, Berlin, Rome, Geneva and Warsaw.

Number of telegrams dealt with at wireless telegraph offices in the past five years was as follows:

	Domestic	Foreign
1933-34:		
Despatched	426,705	53,999
Received	283,616	26,119
1934-35:		
Despatched	537,373	63,856
Received	327,041	30,647
1935-36:		
Despatched	552,718	41,112
Received	314,338	25,418
1936-37:		
Despatched	581,691	49,404
Received	336,186	31,648
1937-38:		
Despatched	655,006	43,050
Received	362,759	24,076

Telephone Service

According to the latest statistics, the number of telephone exchange offices in Japan proper was 5,804 in September and that of subscribers 981,920 in March 1937.

The following tables show the development and present scope of the telephone service:

NUMBER OF TELEPHONE EXCHANGE AND MESSAGE OFFICES

	Sept. 30, 1939	
	Exchange Offices	Other Offices
Japan proper	6,197	11,217
Taiwan	122	62
Karafuto	46	109
Chosen	274	863
Kwantung Leased Territory	4	126
South Sea Islands	5	3

NUMBER OF TELEPHONE SUBSCRIBERS IN JAPAN PROPER

	Total Subscribers	Applicants for Subscription
1930-31	715,020	176,900
1931-32	729,914	172,150
1932-33	761,136	167,276
1933-34	796,538	161,857
1934-35	830,041	154,345
1935-36	870,476	145,049
1936-37	914,320	134,819
1937-38	914,930	124,806
1938-39	1,006,498	—

NUMBER OF TELEPHONE SUBSCRIBERS IN THE TERRITORIES

	Sept. 30, 1939	Subscribers
Territories		
Taiwan		21,003
Karafuto		6,534
Chosen		53,993
Kwantung Leased Territory		16,889
South Sea Islands		990

NUMBER OF TELEPHONE MESSAGES IN JAPAN PROPER

Year	In the Same Subscription Districts		With Other Districts	
	Messages between Subscribers	Hours of Conversation at Offices and Public Requesters	Hours of Conversation Calling out	Requests for Calling out
1933-34	3,564,536,772	36,949,570	43,165	211,604,540
1934-35	3,783,991,018	40,202,841	42,124	236,789,514
1935-36	3,984,266,968	44,791,390	44,494	273,789,863
1936-37	4,412,775,259	51,439,100	61,496	307,733,439
1937-38	4,976,321,936	59,852,742	70,164	342,590,232

FREQUENCIES OF FAULTS WITH URBAN TELEPHONES IN JAPAN PROPER, 1937-1938

		As Compared with the Previous Year
Faults in exchange offices	724,350	+206,135
" subscribers	636,964	- 17,360
" on routes	363,884	- 5,053
Total	1,725,198	+183,722

LENGTH OF TELEPHONE LINES IN JAPAN PROPER 1937-1938

	Km.	As Compared with the Previous Year
Land lines		
Aerial lines, routes	65,921	+ 6,239
" lines	625,633	+ 28,986
Overhead cables, routes	11,629	+ 4,097
" cores	2,268,169	+315,459
Underground lines		
Routes	4,680	+ 741
Cores	4,711,541	+532,429
Submarine cables		
Lines	1,411	+ 324
Cores	67,061	+ 58,203

NUMBER OF TELEPHONE APPARATUSES (Japan Proper in 1937-38)

Magnetic and electric telephone exchanges	12,459	Line finders	5,930
Automatic telephone exchanges	576	Connecters	49,180
Line switches	329,461	Selectors	132,206
		Telephones	1,014,336
		Public telephones	4,983

Wireless Telephone Service

The first experiment with wireless telephony in Japan was made in 1911 by the Communications Ministry with very satisfactory results. It was in 1923, however, that the service was opened for public use between Kobe city and steamers in the harbor. In 1926, this service was extended to Moji. The result being satisfactory, the Government decided further to extend the service and in December 1932, the In-

ternational Telephone Company, with a capital of ¥10,000,000, was established through the solicitation of the Communications Ministry to build up stations for the use of the Government and private bodies. This was done to facilitate wireless telephone service between Japan and the world, Japan's colonies and ships at sea. The transmitting station of the company is established at Nazaki, Ibaraki prefecture, and the receiving station at Komuro, Saltama prefecture, and these stations are connected with

each other and with the Tokyo Central Telephone Office by cables. Wireless telephones are now available between Tokyo, Nagoya, Kanazawa, Kobe, Osaka, Kyoto, Yokohama, Toyohashi, Nara, Himéji, Shimonoséki, Fukui, Fukuoka, Yawata, Wakamatsu, Nishinomiya, Amagasaki and Suma. The service has been opened between Taiwan and Tokyo, on June 20, 1934.

In 1934-35 international wireless telephone service was successively opened between Japan and Manchoukuo, U. S. A., Canada, Mexico, Cuba, Philippines, Dutch East Indies, Sumatra, England, and Germany. The service with other

28 European countries was opened in July 1935, with China in February 1936, with Cape Town and Brazil in April 1936, with Saigon in May 1936, and with Argentina, Uruguay, Paraguay, French-Indo-China, Thai, and Union of South Africa in 1937.

Rates for the first 3 minutes range from ¥80 to ¥92 for European countries and from ¥72 to ¥95 for the U.S.A., the highest being ¥164 for Rio de Janeiro, Brazil. (See the Appendix)

Telephotograph Service This service is available between Tokyo, Osaka, Taiwan and Mukden, and between Tokyo and London.

Radio

Radio broadcasting in Japan is under the control of a single organization, the Broadcasting Corporation of Japan, which in turn is supervised by the Ministry of Communications. Programs are subjected to strict censorship and nothing that might harm the interests of the country and its people is allowed to go on the air. Advertising of all sorts is prohibited. Political speeches cannot be included in the daily programs. Even election campaign speeches and Diet proceedings cannot be broadcasted.

The First Program The first radio program in Japan went on the air on March 22, 1925, five years after the world's first regular commercial broadcasting by the station KDKA, East Pittsburgh, Pennsylvania. The station, using the call letters JOAK, was in Tokyo, and it had a power of only 500 watts. This station, established temporarily at Shibaura, on the water front of Tokyo Harbor, was replaced in July by a 1 kw. station at Atagoyama, a hill in the southern part of Tokyo. In the difficult times following the great earthquake and fire of September 1923, which laid waste a greater part of Tokyo, the radio played an important part in comforting and encouraging the citizens who were working hard to rebuild their city and their homes.

Shortly afterwards, small stations were established in Osaka and Nagoya, which form with Tokyo the three largest population centers. The engineers in charge of these stations were sceptical about their success. There was no assurance that the Japanese public would respond by buying radio sets and listening in, or would like the programs once

they were heard. These fears, however, were groundless. For a time there were not enough receiving sets in the stores to meet the demand. Instead of a novelty, the radio became a daily necessity. Elated at their success, the promoters worked out a plan to centralize all the broadcasting in the country, which was heartily approved by the Ministry of Communications. Before the end of a year, the stations in Tokyo, Osaka and Nagoya were merged, and the Broadcasting Corporation of Japan was formed to assure nationwide cooperation in meeting the demand for more efficient stations and better programs. The present number of broadcasting stations is 7 with 28 sub-stations.

Program Hours The working hours of each broadcasting station in Japan differ a little according to their local conditions as well as the seasons of the year. According to the report of the JOAK, the average broadcasting hours per day in 1938 were 11 hours and 26 minutes in the general broadcasting and 4 hours and 36 minutes in the broadcasting for cities.

The first program of the day is sent out at 6.00 a.m. (from April to October) and at 6.30 a.m. (from November to March), and the closing announcements of the day's program go on the air at 10.30 p.m.

Overseas Broadcast

The Broadcasting Corporation of Japan inaugurated daily short wave broadcast, under the name of "Overseas Broadcast" on June 1, 1935 with the object of furnishing the residents in foreign countries with accurate informa-

tion about Japan and of introducing the culture of Japan.

The programs of this broadcast consist of news in Japanese and English, music, entertainment, talk and eyewitness accounts of various sport events and other subjects, specially selected to present a true and interesting glimpse of the real Japan to listeners abroad.

At present, five separate programs are being sent out on five transmissions: namely, (1) Europe, (2) South America, (3) the Eastern Part of North America,

(4) the Pacific Coast of North America and Hawaii, and (5) China and the South Seas, Indo-China, Malay Peninsula, India and the East Indies. Furthermore, preparations have now virtually been completed for another extension, that is the setting up of two more transmissions so that two new, separate programs may be sent out,—one directed to Hawaii, the other to the Near East. In the near future, these two new transmissions will be formally opened for overseas broadcasting service.

Short-wave transmissions to the above-mentioned directions are as follows:

For EUROPE

Call Sign: JZK 15,160 kc/s (19.79 m.) JZJ 11,800 kc/s (25.42 m.)
Time: 4:00—6:00 a.m., Tokyo Time (19:00—21:00 GMT)

For SOUTH AMERICAN COUNTRIES

Call Sign: JZK 15,160 kc/s (19.79 m.) JZJ 11,800 kc/s (25.42 m.)
Time: 6:30—7:30 a.m., Tokyo Time (21:30—22:30 GMT)

For the EASTERN DISTRICTS of NORTH AMERICA

Call Sign: JLS 2 17,845 kc/s (16.81 m.)
Time: 8:00—9:00 p.m., Previous day (EST) 10:00—11:00 a.m., Tokyo Time (1:00—2:00 GMT)

For the PACIFIC COAST of NORTH AMERICA and HAWAII

Call Sign: JZK 15,160 kc/s (19.79 m.)
Time: 9:00—10:30 p.m., Previous day (PST) 2:00—3:30 p.m., Tokyo Time (5:00—6:30 GMT)

For CHINA and the SOUTH SEAS

Call Sign: JZK 15,160 kc/s (19.79 m.) JZJ 11,800 kc/s (25.42 m.)
Time: 9:00—11:30 p.m., Tokyo Time (12:00—14:30 GMT)

Listeners

When the Tokyo broadcasting station was opened on March 22, 1925, the total number of listeners for the whole country stood around 5,400. On August 29, 1926, when the Broadcasting Corporation of Japan was inaugurated, the number of listeners had reached a figure of over 338,200.

The listening fee of two yen a month which had been calculated to be charged at the time when the broadcasting service was started, was reduced to one yen due to the unexpected increase in the number of listeners. This rate was uniform all over the country.

In September 1928, the number of listeners reached the 500,000 mark. In February 1932, three years and four months later, the number ran into 1,000,000, and in April of the same year, the subscription fee was reduced to seventy-five sen. The so-called "Golden

Age" in our broadcasting begins at this period and in June 1933, the number passed the 1,500,000 mark, and keeping up the momentum, it leapt into 2,000,000 in April 1935. In commemoration of this growth, the subscription fee was reduced to the modest sum of 50 sen a month, which is being kept up to this day.

To sum up, it took about seven years for the number of registrations to reach the first 1,000,000; the next 1,000,000 was reached in three years only; while the subscription fee has been reduced to half the original sum during these 10 years,—a rate without parallel elsewhere in the world.

Thereafter, there was a tendency for the number of registrations to go on rapidly increasing, and on December 28, 1939, the number reached 4,666,058, the rate of distribution representing 33.0 per 100 families.

Radio in 1940 On May 29, 1940 the number of listeners passed the 5 million mark. In connection with the increase in the number of registrants, an inactive diffusion of radio sets in agricultural districts as well as mountain and fishery zones remained a serious defect in the past. Since 1937, however, this defect has been greatly remedied. In a period of three years from 1937 to 1939, for example, the number of registered listeners increased by 132 per cent in village districts, the total number having well exceeded 1,000,000. This increase, despite various inconveniences in listening in to radio broadcasts in village districts as compared with city zones, is believed to be a direct result of the China Affair. In 1940, the number of listeners in the agricultural community gained by 100,470 while those in the fishery zone gained by 3,118, showing a gain of 29,048 or 41 per cent and 1,462 or 88 per

cent, respectively, over the advance of 1939 over 1938. Subscribers among commercial circles increased by 3,386 or 5 per cent from 65,687 in 1939 to 69,073 in 1940 while governmental workers and those engaged in liberal professions increased by 357 or 0.5 per cent from 74,848 in 1939 to 75,205 in 1940. The increase rate in agricultural and fishery professions has tended sharply upward since 1938, while that in commerce has continued downward. The cancellation of registrations by listeners in 1940 was largely attributable to the change of address or travelling. They numbered 38,958 in 1940, rising by 3,994 over 1939. The transfer of radio sets in 1940 numbered 24,754, gaining by 18,703 over 1939 while the cancellations because of troubles of radio sets (21,188 cases in 1940) and overlapped applications (11,879 cases in 1940) were also dominant in 1940.

RADIO LICENSES ISSUED OR CANCELLED IN 1940 BY MONTH

Months	Licenses Issued		Licenses Cancelled	Actual Increase
	Actual Numer	Increase over 1939		
January	102,521	19.6%	24,997	77,524
February	84,302	— 21.7%	27,013	57,289
March	93,183	9.5%	32,721	60,462
April	100,715	13.9%	29,684	71,031
May	108,610	7.3%	38,139	70,471
June	85,091	— 33.5%	30,810	54,281
July	82,489	3.3%	28,139	54,350
August	83,056	0.5%	29,247	53,809
September	75,016	— 10.5%	30,206	44,810
October	75,096	0.1%	32,495	42,601
November	84,992	11.8%	21,024	53,968
December	89,850	8.9%	26,880	62,830
Total	1,064,921	10.2%	361,355	703,426

Note: The mark "—" denotes decrease.

The registration of listeners in 1940 kept on normally increasing in the first five months, January to May, the monthly licenses newly issued averaging 150,000. With the number of cancellations deducted, the net increase of licensed listeners amounted to 66,000 monthly. Specially, the new licenses issued during May totalled 108,000, far exceeding the 102,000, the past high, registered in January 1939, and establishing a new record since the commencement of radio broadcasting in this country. However, the registration started to decline from June and hit the bottom in October, the number of

increased registrations in that month amounting to only 42,000, the lowest since October 1938. With October as the bottom, the upward trend gathered momentum. As a result, the total number of new licenses issued during 1940 came to top the 1,000,000 mark, thus eclipsing the figures for 1939 by more than 98,000. The depression of registration of new listeners in the five months, June to October, may be attributed to a scarcity of radio sets because of the adoption of official prices. In the past, the trend of the registration of listeners was largely based on economic factors, while, in the future

the increased accessibility of radio receiving sets to the general public is expected to affect the registration situation. The new registrations in January 1941 totalled 124,544 while the cancellations in that month aggregated 25,499 with the result that the net increase in registrations amounted to 99,045, the highest record since the beginning of radio broadcasting in this country and

an increase of 21,521 over January 1940. The favorable tone in January was principally due to the steady and smooth supply of radio receiving sets, which was temporarily disturbed in the second half of 1940, because of official restriction of prices, the positive campaigns by the Central Broadcasting Corporation and the general business prosperity.

NUMBER OF REGISTERED LISTENERS IN JAPAN BY PREFECTURES

(End of 1940)

Prefectures	Number of Registered Listeners	Per 100 Families	Prefectures	Number of Registered Listeners	Per 100 Families
1. Tokyo	1,111,309	79.1	26. Ehime	51,883	21.1
2. Osaka	576,136	57.8	27. Fukushima	51,750	18.4
3. Hyogo	294,808	45.6	28. Toyama	49,313	31.3
4. Aichi	291,243	48.3	29. Wakayama	48,640	25.7
5. Kanagawa	246,724	63.7	30. Nara	48,587	38.4
6. Fukuoka	213,042	37.8	31. Yamanashi	45,940	36.3
7. Kyoto	184,110	49.4	32. Oita	41,456	20.7
8. Hokkaido	165,411	28.8	33. Ishikawa	41,156	25.8
9. Shizuoka	153,398	42.1	34. Kagawa	39,433	25.6
10. Hiroshima	123,841	31.2	35. Shiga	38,105	24.8
11. Nagano	107,121	32.1	36. Yamagata	37,608	19.9
12. Niigata	106,621	29.4	37. Shimane	36,448	23.0
13. Chiba	105,928	35.0	38. Fuku	33,393	24.3
14. Saitama	105,724	37.0	39. Aomori	32,358	18.9
15. Kumamoto	85,086	31.7	40. Kochi	31,398	20.1
16. Okayama	81,261	28.4	41. Miyazaki	31,001	18.7
17. Yamaguchi	80,724	30.3	42. Tokushima	30,825	20.8
18. Gumma	78,125	33.9	43. Iwate	30,709	17.2
19. Gifu	70,079	28.1	44. Saga	30,119	23.6
20. Tochigi	68,695	31.2	45. Akita	29,335	16.2
21. Ibaraki	67,040	22.7	46. Tottori	22,758	23.8
22. Miyagi	63,121	30.1	47. Karafuta	14,047	21.5
23. Miye	59,665	24.7	48. Okinawa	1,237	0.96
24. Nagasaki	56,350	21.6	49. South Seas	293	1.3
25. Kagoshima	56,070	16.6	50. Total	5,369,898	37.9

YEARLY INCREASE OF LISTENERS

Year	Number of new registrations	Number of discontinuances	Number of Net increases	Total number of listeners at the end of year	Per 100 Families
1935	659,174	216,072	443,102	2,422,111	17.9
1936	728,777	246,128	482,649	2,904,823	21.4
1937	942,550	262,818	679,732	3,584,462	26.4
1938	878,089	296,900	581,189	4,165,729	29.4
1939	716,628	216,299	500,329	4,666,058	33.0
1940	1,064,921	361,355	703,426	5,369,898	37.9

COMMUNICATIONS

REGISTRATIONS BY CITIES AND RURAL COMMUNITIES

	Total		Cities		Town & Villages	
	Number of licence holders	%	Number of licence holders	%	Number of licence holders	%
1935	2,304,479	100	1,628,059	70.6	676,420	29.4
1936	2,776,189	100	1,915,857	69.0	860,332	31.0
1937	3,402,489	100	2,259,513	66.4	1,142,976	33.5
1938	4,165,729	100	2,632,629	63.1	1,533,100	36.8
1939	4,666,058	100	2,897,837	62.1	1,768,221	37.9

CHAPTER XXIV

LAND AND AIR TRANSPORTATION

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CHAPTER XXIV

LAND AND AIR TRANSPORTATION

State Railways

Historical Background

Japan's railway projects date from 1869, when the Government formed a plan to lay a trunk line linking Tokyo with Kyoto and Kobé, together with some branches to Yokohama and Tsuruga, a port on the Japan Sea. As the first step, half a million yen was sanctioned for the work between Tokyo (Shimbashi) and Yokohama, but the State Treasury was in no position to find this amount, while private capital declined to venture into this novel field of investment. It was at this time that an Englishman, Horatio Nelson Lay, by name, came forward with a proposal to furnish the required funds. The terms offered by him were accepted and a Japanese loan for one million sterling was placed on the London market. With the arrival of a British engineering corps and materials, the first sod was dug on the 28.062 kilometer Shimbashi-Yokohama section in March 1870, and on the 32.18 kilometer Kobé-Osaka section in November 1870. The gauge adopted for these lines was one of 1.067 meters, which has later become the standard gauge of the Japanese railways.

Tokyo-Yokohama and Other Lines

The work between Shimbashi and Yokohama was completed in September 1872, while the Kobé-Osaka line was opened to traffic in 1874 and it was further extended to Kyoto in 1877. These sections have practically formed the nucleus of what now constitutes the Tokaido Line, one of the main arteries of railway traffic in Japan. In 1880, the Kyoto-Otsu section was completed and in 1884 a further extension with a length of 41.834 kilometers between Tsuruga and Nagahama, a town along Lake Biwa, was completed and opened to traffic in pursuance of the railway idea of linking up the Pacific and the Japan Sea. Meanwhile, a survey was made on the Otaru-Horonai section in Hokkaido, where colonization work was be-

ing strenuously encouraged. Construction of this section was soon undertaken and the 88.495 kilometer length was opened to business in 1882, thus bringing the total length of railway under Government ownership toward the close of 1884 to 185.035 kilometers.

Private Lines About this time the Government was in financial difficulties and the building of State railways practically came to a standstill except for a few extensions. It was at this time that, not being in a position to undertake the work itself, the Government began to encourage private enterprise, the encouragement mostly being in the shape of subsidies. Under these circumstances, many private railways were built in rapid succession, the most notable among them being the Nippon Railway, the Sanyo Railway, the Kyushu Railway and the Hokkaido Colliery Railway. The total length of line thus built by private capital in the ten years between 1881 and 1891 aggregated 1,874.485 kilometers, a length more than double that of the State which did not exceed 886.559 kilometers by the end of 1891.

The Trunk Line Prior to this, the Government decided to lay a trunk line through the Nakasendo, the old mountainous highway of Central Japan, but in view of engineering difficulties along this line it was subsequently abandoned in favor of the level region of the Tokaido. Work on the new route was finished in July 1889, whereby a through service was opened for a distance of 611.42 kilometers between Tokyo and Kobé. Then a branch to Yokosuka was opened and a 160.9 kilometers section between Takasaki and Naoetsu was completed with the exception of 9.654 kilometers over the Usui Pass. This difficult section, for which the Abt rack rail system was adopted, was not opened for service until 1893.

The Railway Construction Law In view of the industrial progress being

made in the country there was an urgent demand for the speedy construction of more railways. The entire length of Japanese railways at that time amounted to only 2,574.4 kilometers and the bulk of contemplated lines was in remote districts with no prospect of immediate profit, and on that account did not appeal to private enterprise. These circumstances showed both the Government and the public the advisability of state acquisition of private lines and opinion was further strengthened by the financial failure of some of the private concerns. In view of this, in 1892, the Railway Construction Law was passed and the Government set to work constructing important lines. The law embodied a comprehensive program of railway building and contained the guiding principles on which the railway system of Japan was founded. At the same time the matter of consolidating the different lines into one complete system was being studied by a committee of enquiry appointed by the Government. The acquisition of private railways was accomplished in October 1907, the subsidiary businesses being taken over at the same time. Immediately after nationalization the State Railways were organized under a Railway Bureau, which was directly responsible to the Cabinet. But in May 1920, a separate Ministry of State was created to deal with railway affairs and the Minister of Railways was appointed to control it.

Railway Network

The law of 1892 authorized the Government to build certain specified lines within a certain limit of time, and also to buy up such private railways as were judged necessary for the completion of a unified system. Pursuant to this program the State Railways proceeded with the work of construction and in 1906 and 1907 purchased 17 private lines to a total length of 4,547.034 kilometers, thereby bringing under national control all the railway lines in Japan proper, with the exception of feeding lines of local importance. In 1922 after a careful survey of the State lines the Railway Construction Law was modified and some new lines were added to the original program. At the same time it was decided that, pursuant to the new law, such local lines as formed a connecting link between the State lines,

either already projected or considered necessary for completing a unified national railway system be purchased.

Organization and Staff

Prior to the nationalization of the private lines, the State lines were operated on a departmental system based on the principle of centralization. The system worked well because the management of the State lines was a relatively small business, but when the Government assumed the management of all lines it was found unequal to the extra work, and in December 1908, the Imperial Government Railways were removed from the control of the Minister of Communications and assigned to a newly created administrative body, the Railway Board. The administration was then decentralized and remains so today. The existing system of organization of the State Railways was established in May 1920, when the said Railway Board was made, by virtue of Imperial Ordinance No. 143, an independent department of the Central Government. According to the regulations, the Ministry of Railways not only controls the whole of the State lines, but supervises the provincial railways and tramways in Japan proper. It maintains one central and six regional offices. The Central Office is directly governed by the Minister of Railways and manages all matters relating to the State Railways as well as maintaining supervision over provincial railways and tramways. It is composed of eight bureaux according to the kind of business dealt with. They are the Minister's Secretariat; Bureau of Local Railway Administration; Bureau of Traffic and Operation; Bureau of Construction; Bureau of Maintenance and Improvement; Bureau of Mechanical Engineering; Bureau of Electricity; and Bureau of Finance and Purchase. The Central Office also controls Regions, District Construction, District Improvement, District Electric Offices and Tokyo Railway Hospital. On April 23, 1930, by virtue of Imperial Ordinance No. 83, a further bureau, the Board of Tourist Industry was created as a separate bureau of the Ministry of Railways. The bureau is controlled by the Minister of Railways and attends to the business of the tourist industry, its object being to encourage people of other lands, by advertising and in other ways, to visit Japan and

see her incomparable scenic beauty, natural charm and national manners and customs, and to encourage Japanese living at home to take trips to different parts of the Empire.

As stated above, the administration of the State Railways is decentralized into six regions, Tokyo, Nagoya, Osaka, Mōji, Sendai and Sapporo. Each region is a complete unit and is in charge of a director who is vested with power to conduct, at his own discretion, all affairs relative to his jurisdiction, excepting matters of general and large import for which decision of the central administration has to be obtained.

In the State Railways of Japan the members of the staff are either Government officials or employees.

On March 31, 1937 there were altogether 227,689 (8,118 females) servants in the employment of the State Railways as against 218,352 in the preceding year. The total salary for the year 1936-37 was ¥153,812,691 as against ¥147,990,026 in 1935-36. The average annual salary per person in employment was ¥676. As compared with the preceding year, the staff shows an increase of 9,337 during the year, and the annual payment of salaries increased by ¥5,822,665.

Traffic

Earnings of the State Railways from traffic in Japan proper in the past 10 years follow:

Fiscal Years	Goods Traffic	Working Revenue		Total
		Passenger Traffic	Miscellaneous	
(Unit ¥1,000)				
1931-32	180,365	245,359	7,824	433,540
1932-33	178,717	239,017	8,219	425,954
1933-34	203,189	261,159	9,905	474,254
1934-35	225,246	282,857	10,564	518,668
1935-36	233,397	300,422	10,714	544,534
1936-37	259,773	326,610	11,786	598,171
1937-38	294,133	359,573	16,458	670,164
1938-39	338,963	412,462	17,522	768,947
1939-40	356,383	527,140	—	883,524
1940-41	371,044	623,827	—	995,772

Accident and Casualty Returns The number of accidents reported during the year 1937 totalled 6,885, or 10.7 per 1,000,000 train kilometers, showing an increase of 1,360 in number and of 6 per 1,000,000 train kilometers as compared with the preceding year. The number of casualties, including those caused by accidents, errors or unknown causes, numbered 3,990, during the year, or 14.2 casualties per 1,000,000 train kilometers. As compared with the preceding year this is an increase of 570 in the total number, and a decrease of 1.5 per 1,000,000 train kilometers. The number of casualties caused by suicide was 1,567, or a decrease of 269 as against the preceding year.

Length of Open Lines

The total length of State lines open for traffic on March 31, 1938, the end of the fiscal year of 1937, reached 20,501 kilometers as against 17,422 kilometers in 1936-37, showing an increase of 3,079 kilometers. The total length of tracks

in 1936-37 reached 27,801,925 kilometers as against 27,299,552 kilometers in 1935-36, indicating an increase of 502,373 kilometers. Of the total length of lines open for traffic 15,253,323 kilometers are covered by single tracks, 1,945,749 by double tracks, 18,800 by triple tracks, 204,332 by quadruple and the rest by multiple tracks.

Finance

By Railway Special Account Law, enforced since 1909, the budget of the State Railways was made separate from the general finances of the State. Furthermore, the law provides that all capital expenditure for railway construction and improvement should be met from the revenue accruing from all sources of traffic and that the expenditure should, in case the revenue is not sufficient to cover it, be supplemented by the proceeds of public loans issued as a charge on this special account.

The Capital Revenue settled for the

fiscal year 1938 was ¥239,926,000 as against ¥248,030,000 of the expenditure settled, being an increase of ¥42,763,000 for the former and of ¥35,244,000 for the latter as compared with the preceding year. The increase in the revenue settled was attributable chiefly to the increase in amount transferred from the railway profit, as well as proceeds of sundry receipts, while the gain in

the expenditure settled was due to the increase in the expenditure on the railway construction, and the improvement and the motor routes, as well as the sum appropriated to the redemption of liabilities. The total amount of capital reached ¥4,454,302,327 at the end of March 1939. Below are given returns on this account settled for the past three years:

Item	1936-37	1937-38 (In yen)	1938-39
Capital revenue	172,936,606	195,798,000	238,605,000
Surplus on stores account	425,838	1,376,000	1,321,000
Total revenue	173,352,444	197,173,000	239,926,000
Construction, improvement and motor-car routes	136,405,478	148,255,000	175,164,000
Redemption of debts	22,287,245	22,531,000	22,866,000
Temporary expenses	—	2,000	—
Transfer to general account	—	30,000	—
Transfer to special account of temporary military expenses	—	—	40,000
Supply for stores fund	—	10,000	10,000
Total expenditure	158,692,723	212,786,000	248,030,000

Stores Account The settled amount of Stores Account Revenue for the year 1938-39 was ¥305,543,000 and the expenditure on this item amounted to ¥321,493,000, or an increase of ¥75,211,000 for revenue and of ¥91,063,000 for expenditure as compared with the previous year. The increase in the revenue was accounted for partly by the larger pro-

ceeds of sales of railway stores, and partly by the increase in receipts accruing from repairs of railway stores and from the supply of electric current while the increase in the expenditure is accounted for by the rise in the stores and workshop expenses and the charge for electric current.

Items	1936-37	1937-38 (In yen)	1938-39
Railway stores and workshop receipts	190,814,739	230,332,000	305,543,000
Railway stores and workshop expenses	185,415,437	230,430,000	321,493,000

Revenue Account The total revenue settled during the year amounted to ¥1,096,486,000 and the total expenditure ¥896,043,000 which are respectively ¥198,273,000 and ¥163,979,000 more than in the previous year. The increase in the revenue was attributable to the increase of the traffic and the sundry receipts, as well as receipts on suspense

account and advances, while increase in the expenditure was accounted for by the growth in working expenses and subsidies to local railways, as well as the increase in refunds and advances appropriated for the C.O.D. payments.

The Revenue Account settled for the past three years is as follows:

Items	1936-37	1937-38 (In yen)	1938-39
Revenue:			
Traffic receipts	591,252,994	662,747,000	760,524,000
Sundry receipts	11,809,580	13,473,000	13,729,000
Receipts on suspense account and advance	193,035,911	221,993,000	322,233,000
Total	796,098,485	898,213,000	1,096,486,000

Items	1936-37	1937-38 (In yen)	1938-39
Expenditure:			
Working expenses	362,542,819	412,050,000	477,455,000
Interest charges	83,206,220	83,793,000	84,133,000
Refunds and advances	198,005,869	229,546,000	327,560,000
Secret service fund	27,440	27,000	25,000
Subsidies to local railway	6,854,027	6,647,000	6,870,000
Total	650,636,455	732,064,000	896,043,000

Fixed assets of the State Railways for the last 10 years follow:

(In ¥1,000)			
End of March		End of March	
1930	3,246,724	1935	3,728,485
1931	3,374,392	1936	3,850,507
1932	3,413,786	1937	3,987,210
1933	3,503,893	1938	4,127,200
1934	3,613,169	1939	4,283,600

BUSINESS INCOME AND EXPENSES

(In ¥1,000)

Fiscal Years	Income	Expenses	Profit	Fiscal Years	Income	Expenses	Profit
1929-30	518,016	399,026	118,989	1934-35	518,668	314,126	204,541
1930-31	458,140	382,552	75,587	1935-36	544,534	329,537	215,997
1931-32	433,540	365,088	68,451	1936-37	598,171	354,420	243,751
1932-33	425,954	364,874	61,079	1937-38	670,164	406,692	263,472
1933-34	474,254	282,199	192,054	1938-39	768,947	470,007	298,940

Note: Figures include those for businesses other than railway traffic.

Private Railways

General At the end of 1938 the number of local railways in Japan proper was 297. The aggregate amount of capital reached ¥1,519,002,170, reserve funds ¥86,114,556, net profit ¥63,410,103 and dividend ¥50,291,647. The total open kilometerage in March 1938 was 6,793 km., a decrease of 2.25 km.

WORKING RESULTS OF LOCAL RAILWAYS IN JAPAN PROPER

(1933-34 to 1937-38)

Items	1933-34	1934-35	1935-36	1936-37	1937-38
Number of railways	266	260	257	250	246
Kilometerage opened	7,184.55	7,088.22	7,097.56	7,018.77	6,793.00
Earnings from passenger traffic (yen)	59,062,591	62,262,808	64,172,467	68,929,859	73,543,000
Earnings from goods traffic (yen)	19,307,870	26,303,665	21,420,598	22,308,862	23,630,000

N.B.—The above table does not include the lines belonging to private individuals for their exclusive use.

Tramcar Service The tramways in Japan date back from 1880, when an application was tendered for the construction of the Tokyo Horse Tram Co.'s line which was completed and opened to traffic in 1883. As provided by the

Tramway Law now in force, all the tramways in Japan are constructed as a rule on highways. The street railways, a certain number of suburban railways and others laid in provinces are placed under the control of the Law. Such public bodies as cities, towns and vil-

lages may take the management of tramways without restriction. Steam and electricity are mostly employed as motive power except a few local tramways where gasoline, horse or human power is used for the purpose.

WORKING RESULTS OF TRAMWAYS

	Number of Companies		Open Kilometerages		Income from Traffic (In ¥1,000)		
	Electric	Steam	Electric	Steam	Passage	Freight	Total
1933-34	92	33	2,059	339	101,864	1,130	102,994
1934-35	89	32	2,062	337	104,744	1,268	106,012
1935-36	85	28	2,035	298	108,126	1,109	109,235
1936-37	86	26	2,055	272	113,794	1,108	114,902
1937-38	85	25	2,036	235	120,176	1,117	121,293

Land Transportation in 1940-41

Increase in Volume of Transportation by Government Railways The business conditions of the Government Railways during the 1940-41 fiscal year ending March 31, 1941, were the best during recent years due to the activities of general industrial and commercial circles, and the movement of passengers and goods in connection with the emergency. The total proceeds amounted to ¥995,771,947, even without including miscellaneous revenue which may have

reached over ¥20,000,000. The amount represents an increase of ¥112,248,041 or 12.7 per cent over the previous fiscal year. Both the number of passengers carried and the volume of goods hauled showed a record increase.

The business conditions of private railways in 1940 improved, in general, the rates of profit and dividend rising from 8.4 and 7.1 per cent to 9.2 and 7.5 per cent as compared with the previous year.

BUSINESS RESULTS OF 27 PRIVATE RAILWAY COMPANIES IN 1939

(Unit: ¥1,000)

	Paid up Capital	Working Revenue		Net Profit		Rate of Dividend	
		1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half
Tokyo-Yokohama district							
Tobu Railway	45,700	6,507	7,716	2,251	3,108	7.0	8.0
Kelisei El. Railway (El. Power)	26,325	6,476	2,522	1,726	1,859	8.0	9.0
Oji El. Railway (El. Power)	17,000	725	724	1,502	1,363	10.0	10.0
Keio El. Railway (El. Power)	14,513	1,446	1,617	1,080	1,285	8.0	9.0
Odawara Express R.	25,700	1,690	2,175	376	680	2.4	4.5
Kelhin El. R.	15,000	2,419	2,556	1,254	1,522	8.0	9.0
Shonan El. R.	9,200	2,022	2,148	599	643	5.5	6.5
Tokyo-Yokohama El. R.	56,701	3,609	7,838	1,539	4,353	10.0	10.0
Tokyo Underground R.	40,105	4,680	4,461	1,759	1,575	6.0	6.0
Tokyo High Speed R.	85,000	190,820	434,201	—	204	5.0	5.0
Seibu Railway	4,860	827	895	157	175	—	3.0
Musashino Railway	2,600	1,027	1,147	241	349	6.0	6.0

	Paid up Capital	Working Revenue		Net Profit		Rate of Dividend	
		1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half
Aomé E. R.	3,280	327	380	144	183	5.0	6.0
Chichibu Railway	4,295	699	733	304	313	6.0	7.0
Sagami Railway	3,240	—	—	246	259	5.0	5.0
Kansai district							
Hanshin E. R. (El. Power)	61,750	4,707	5,560	3,701	3,906	9.0	9.0
Hanshin Express E. Railway (El. Power)	55,000	5,196	6,042	3,735	3,744	10.0	10.0
(Department store)		2,620	2,578				
Keihan (El. Power)	64,576	5,475	6,213	2,056	2,729	4.0	5.0
(El. Power)		2,808	2,886				
Nankai Railway (El. Power)	52,400	6,286	6,582	2,913	3,013	10.0	10.0
(El. Power)		3,481	3,450				
Osaka E. Railway (El. Power)	49,290	4,863	5,858	2,401	3,131	8.0	8.0
(El. Power)		1,452	1,574				
Sangu Express E. Railway	37,220	2,756	3,111	706	898	No dividend	No dividend
Osaka Railway	16,010	1,216	1,496	423	602	No dividend	No dividend
Hanwa E. Railway	20,000	1,848	2,290	471	757	3.0	4.0
Central Japan							
Ina E. R. (El. Power)	13,151	778	847	670	710	6.0	6.0
(El. Power)		664	695				
Nagoya Railway	49,678	5,163	5,372	1,901	1,986	9.5	9.5
Mikawa Railway	4,688	614	723	156	276	3.0	4.0
Kyushu							
Kyushu E. R. (El. Power)	44,000	2,117	2,276	2,727	2,295	6.0	7.0
(El. Power)		6,544	6,530				

Railways in Chosen, Taiwan and Karafuto

Chosen

The first railway enterprise in Chosen dates back to 1890, when a railway linking Kéijo (Seoul) with Jinsen (Chemulpo), 29.485 kilometers in length, was laid and opened to traffic by the Kéijo Railway Company. The outbreak of the Russo-Japanese War caused the military authorities of Japan to build the Kéijo-Fusan, Kéijo-Shingishu and Masan lines which were opened to traffic in 1905 and 1906 respectively. In 1906 the Imperial Government of Japan nationalized the Kéijo-Fusan Line and also took over the Kéijo-Shingishu and the Masan Lines from the War Office of Japan, placing all these lines under direct control of the Railway Bureau of the Korean Residency-General. Meanwhile the work of construction was steadily pushed on and in 1910 the Héijo-Chinnampo line was completed. On the spanning of the Yalu River with a swing bridge in 1911 the peninsular railway was brought into connection with the South Manchuria Railway. In 1914 the Taiden-Mokpo and Kéijo-Gensan lines

were completed, while in 1915 part of the Gensan-Kainéi line was opened. In 1928 the Kankyo line which connects Kainéi to Gensan was completed, and in 1933 the Tomon line which connects Kainéi to Yuki was opened to traffic. The latter is connected with the Kelto line of S.M.R.C. at Kainéi, thus preparing a new eastern transportation facility between Chosen and Manchou-kuo. On March 31, 1940, the State Lines in Chosen open to business totalled 4,089.5 km. as against 3,831.1 km. in 1939 showing an increase of 258.4 km.

The aggregate length of private railways open to traffic at the end of March 1940 amounted to 1,854.6 kilometers. The number of private companies which are already operating railways in Chosen numbered 17, viz., Chosen Railway Company, Chosen Kéinan Railway Company, Kongosan Electric Railway Company, Shinko Railway Company, Keishun Railway Company, West Chosen Central Railway Company, Chosen Kéito Railway Company, Chosen Helan Railway Company, Chosen Coal Industry Company,

South Manchurian Railway Company, East Manchurian Railway Company, South Chosen Union Electric Company, Heihoku Railway Company, Sansho Railway Company, Hokusen Takushoku Railway Company, Tanho Railway Company, and Tashito Railway Company. Besides, there were 5 tramcar companies for city traffic. The above mentioned companies, if their aims are general transportation, receive regular subsidies from the Government. The aggregate capital of the railway companies amounted to ¥188,633,251. The total length of tramways operated in Chosen came to 8.23 kilometers indicating a gain of 1.4 kilometers over the previous year. The power used is mostly electricity. (See Chapter XL for fuller information.)

Taiwan

It was not until the cession of the island of Taiwan (Formosa) by the Chinese Government to Japan that the island began to enjoy railway facilities, for, prior to that time, the only railroad existing was a small light railway between Keelung and Shinchiku built at the time of the Ching Dynasty. Soon after the cession, the Taiwan Government-General brought forward a plan, with the approval of the Diet, to build a railway connecting Takao with Keelung at the expense of ¥28,800,000. Work was started in 1889 from both termini and finished in April 1908. This line now forms the trunk line in the island's communication system. The construction of this pioneer line was followed by other lines, that is, the Kyukyodo-Heito section completed in 1912, the Tai-to line in 1917 and the Giran line in 1924. The length of lines open to traffic on March 31, 1939, was 881.9 kilometers, being the same as the preceding year. The working route kilometerage of the Government lines was, in 1939-40, 885.1 kilometers. Earnings from passenger traffic amounted to ¥15,170,660, from hauling goods ¥20,221,171, making a total of ¥35,391,830, an increase of ¥4,284,803 or 13.7 per cent over the previous year.

Most of the private railways existing in Taiwan were originally constructed by sugar refining companies for trans-

porting sugar and other materials, transportation business being conducted only as a side work. At the end of 1939, there were the total working km. of 2,051.2. The earnings of the companies through the railway business amounted to ¥3,158,663.

The tramways which form an important factor in the island communication system have made a marked development in recent years. The total length of lines in operation on March 31, 1940, was 700.6 km., and the total receipts ¥1,163,725.

Karafuto Railway

The first railway in Karafuto (Japanese Saghalien) was constructed by the Military Department in 1906 between Otomari, formerly known as Korsakovsa, and Toyohara, formerly Vladimolocka, 41.83 km. in length. It was a light railway with a gauge of 0.61 meter and exclusively used for military purposes. With the withdrawal of the military Government in April 1907, the railway was transferred to the control of the Karafuto Administration and opened to public traffic in August of the same year. As traffic went on increasing the gauge was widened to 1.07 meters, some time in 1910, while construction of sections further north of Toyohara was started. Late in 1911 the work on the Toyohara-Sakaehama section being completed, the Otomari-Sakaehama section, 94.13 km. which now forms the trunk line in the island's communication, was opened to traffic. Construction work has been continued since and a branch line linking the Kawakami Mine with Konuma, and the Honto-Noda section on the west coast were completed and opened to business in 1914 and 1920 respectively. In addition, the construction of a branch line which connects Toyohara, the capital of the island, with Maoka on the west coast, was started in 1921 and opened to business in 1928.

In 1939-40 the earnings of the government railways were ¥1,531,770 from passengers and ¥2,263,364 from goods, making a total of ¥3,795,134.

There are altogether three local railway companies that have run railway business in Karafuto.

Motor Transport and Its Development

Behind Japan's motor transport system there is no such history of ex-

perimentation and endeavor as characterizes the arrival of the motor car

in the West. The first car seen in Japan was one imported from America by a foreign resident of Yokohama in 1897, and then for the next ten years there was no great increase in the number. In 1907 there were only 16 cars in the whole country. Then came a change. In 1912 there were 520 vehicles and a year later 1,000. In 1921, passenger cars numbered 4,683 and business cars numbered 7,439. The great earthquake and fire which destroyed Tokyo and Yokohama in 1923 brought about a great demand for motor cars because rail traffic was interrupted at various places and the help of motor cars was badly needed. In 1924, the number increased to 40,070, of which 27,959 were passenger cars and 12,097

were trucks. The rate of increase for the five years 1921-26 for passenger cars was 100.49 per cent and for trucks 1,200.6 per cent. This rapid development of motor car transport has driven rikishas, electric cars and provincial railways into the background. Motor-car passengers are increasing year after year, while passenger receipts on provincial railways are quickly decreasing. To the present, except in the vicinity of large cities, Japan has not been blessed with good roads, but the construction of first-class motor roads is being pushed ahead in all parts of the country and traffic is bound to make a phenomenal increase as the roads are completed.

NUMBER OF MOTOR CARS IN JAPAN PROPER

At the end of	Ordinary Cars					Total
	Private	Taxicabs	Trucks	Special Cars	Small Cars	
1933	7,723	59,010	38,190	5,187	25,124	135,234
1934	7,970	62,511	42,059	4,938	39,095	156,573
1935	9,213	64,795	46,918	5,065	49,913	175,904
1936	—	74,910	—	4,978	63,348	194,574

Number of Cars in Principal Prefectures in 1936

	Ordinary Cars	Trucks	Special Cars	Small Cars	Total
Tokyo	17,991	10,905	1,095	16,347	46,338
Osaka	6,019	4,039	477	11,517	22,052
Hyogo	2,620	3,405	226	3,761	10,012
Kanagawa	2,430	2,363	128	2,186	7,107
Aichi	3,008	2,704	416	4,587	10,715
Shizuoka	2,348	1,811	113	1,563	5,835
Fukuoka	3,353	1,047	217	1,807	6,424
Kyoto	2,540	1,419	180	2,125	6,264

Note: Conditions of motor transportation are not made public since 1937.

Aviation

History of Development

The Early Period During the Satsuma Rebellion in 1877, two balloons were built. In 1891, Chuhachi Ninomlya made a model of an aeroplane shaped like a bird from his own design, and, in 1894, another shaped like an insect. In 1897, Isaburo Yamada obtained a patent for a kite balloon of his own invention. Two of these kite balloons were used in the siege of Port Arthur during the Russo-Japanese War. In 1907, a balloon corps was organized in the Telegraph Corps at Nakano, and, in June 1909, a special military balloon

investigation association was established. In March 1910, a gliding test of aeroplane No. 1 of the Hino type was made at Toyamagahara, Tokyo, and, in October that year, a flying test of an aeroplane of the Narahara type was made. On December 19 of the same year, Lieutenant Tokugawa (now Lieutenant-General) flew 3,000 meters in four minutes in a Farman aeroplane at Yoyogi, and Captain Hino flew in a Glady aeroplane. This was the first time that an aeroplane flight was carried out in Japan.

The First Civilian Flight In the

spring of 1911, airship No. 2 of the Yamada type was taken out of the hangar at Osaki, Tokyo, and made a successful cross-country flight. In March and April of the same year, an American flyer carried out an exhibition flight in Osaka and Tokyo; on April 8, Shinzo Morita, who had studied flying in France, flew in a 45 h.p. monoplane over the Joto parade-ground in Osaka, this being the first flight by a civilian flyer in this country; and, in April that year, the aerodrome and flying ground at Tokorozawa were completed. In June 1912, Atwater, an American flyer, conducted a series of exhibition flights by hydroplane on the sea off Nishinomiya near Osaka; and, in July that year, five officers were selected from each army division to be trained as flying officers. This marks the beginning of instruction in flying to military officers in this country. In the autumn of 1912, a number of aeroplanes and airships participated in the grand military manoeuvres. In February 1913, the Tôkoku Hiko Kyokai (Imperial Aeronautical Association) was established; on May 4 that year, Mr. Kôka Takéshi, a civilian flyer, started on a Naruo-Osaka-Kyoto flight, but, when landing in the Fukakusa parade-ground in Kyoto, he met with disaster and died as the first victim of civilian aviation in Japan.

Contest of Civilian Aviators In 1914, a contest by civilian aviators was held at Naruo, near Osaka, under the auspices of the Imperial Aeronautical Association, and, during the Tsingtao campaign Japanese military aeroplanes took part in actual fighting for the first time and displayed their ability in scouting, in bombing the enemy fortress and in an aerial combat with enemy planes. In 1915, a meet of civilian flyers was held in Osaka, and a military flying battalion was formed. Between January and April 1916, American aviators visited Japan and performed stunt flying at Naruo and other places; and, on April 27 that year, night flying was successfully carried out for the first time in this country. In 1917, the flying battalion was enlarged into the first and second battalions and a balloon corps. In April that year, Art Smith, an American flyer, again visited Japan and carried out a series of high-class exhibition flights in Osaka and Tokyo. In April 1918, Masao Goto, a private flyer, succeeded in making a non-stop flight

between Tokorozawa and Osaka for the first time.

Military Flying School In April 1919, the Military Aeronautical Department and the Military Flying School were established; and, on October 22 that year, the first mail transport flight between Tokyo and Osaka was carried out with success. In 1920, the Aeronautical Institute was established at Tsukishima, Tokyo; and in May that year, two Italian aviators paid a visit to Japan by air. In March 1921, the regulations for the control of aviation were put in force. In the autumn of 1922, the Japan Aerial Transport Institute started a regular flying service between Sakai and Shikoku by hydroplanes. In 1923, the military air force was made an independent arm. The Osaka Asahi Shimbun started a regular air service between Tokyo and Osaka in January and the Japan Aerial Navigation Co., Ltd., opened one between Osaka and Beppu in July that year. In March 1924 the dirigible S. S. No. 3 exploded and, in September of that year, the trial flight of the newly built airship Astra was carried out.

Air Mail Traffic In April 1925, air-mail traffic was started between Tokyo and Osaka; and, on July 25 that year, an aeroplane of the Asahi Shimbun took off from the Yoyogi parade-ground in Tokyo and, on October 27, reached Rome after a flight of 16,000 kilometers (in stages) via Moscow, Paris and London. In 1926, the Japanese Navy purchased from Italy the dirigible S.No. 3, which was one with a semi-rigid envelope, introduced into Japan for the first time. In June 1927, the Aviation Law came into effect. In May, the Coast Defense Association successfully carried out a flight round the mainland, and, in October that year, the airship S.No. 3 exploded, while participating in the grand naval manoeuvres. In April 1928, Haputo, a civilian aviator, established a new record by flying 2,000 kilometers in 13 hours and 23 minutes; and, in July that year, aerial defense manoeuvres were conducted in Osaka.

The Air Transport Co. In 1929, the Japan Air Transport Co., Ltd., was established and inaugurated a regular air passenger service between Tokyo, Osaka and Fukuoka, later extending it to Seoul and Dalren; and two Army scouting planes of the 88 type flew between Tachikawa and Héito without stopping, mak-

ing a record of aerial connection between the mainland and Taiwan. On their homeward flight, one of the planes flew for 15 hours and 15 minutes, thus establishing a new record of staying in the air in this country. In 1930, the Japan Students' Aviation League was formed and associations for the study of aviation were established one after another in different universities and colleges in Tokyo and Osaka. Yoshihara, a civilian flyer, flew from Berlin to Tokyo via Siberia in 11 days and simultaneously, Azuma, also a civilian flyer, reached Tokyo from Los Angeles via New York, London, Berlin and Siberia. In March 1931, the airship No. 8 which had been made in Japan and belonged to the naval air force at Kasumigaura took off and stayed in the air for a record length of time of 60 hours and one minute.

In May, the Aeronautical Institute which ranks as the best research station in the world was completed six years after the starting of its construction. In the same month, the aeroplane "Young Japan" belonging to Hôsei University, a member of the Students' Aviation League, set off for Europe from the flying ground at Hanéda near Tokyo and, at the end of August, reached its destination, Rome. After the outbreak of the Manchurian trouble in September that year, our military planes participated in actual warfare for the first time since the Tsingtao campaign. In October of the same year, the aeroplane (Fokker No. 3M) of the Japan Air Transport Company succeeded in flying between Taiwan and the mainland.

The Dai-Nippon Airways Company Under the auspices of the Ministry of Communications a new airway company was incorporated on December 1, 1938, through a merger between the Japan Air Transport Company and the International Air Transportation Company. It is called the Dai-Nippon Kôkû Kabushiki Kaisha or the Dai-Nippon Airways Company. The establishment of the company was contemplated by the Ministry of Communications for the development of civil aviation in 1938 and the merger of the two companies was the first step for the realization of a monopolistic half-governmental airway company. The Bill for the establishment of the Dai-Nippon Airways Company was prepared by the Ministry and submitted to the

Imperial Diet. Through the adoption of the bill by the 74th session which met in the early months of 1939, the Dai-Nippon Airways Company's capitalization was fixed at ¥100,000,000. The company has the right of monopolizing the national and international civil airway transportation business of the country, receiving subsidies from the National Treasury and is authorized to issue debentures not exceeding twice the amount of paid-up capital.

Of the total amount of the capital, ¥37,250,000 shall be invested by the Government in cash and fixed assets; the number of shares shall be 510,000 (face value ¥50) representing ¥25,500,000, the amount to be paid-up being ¥17,025,000 according to the provisions of the law and the Imperial Ordinance for the establishment of the company.

The present major air routes in Japan are Tokyo-Dairen, Fukuoka-Taihoku, Tokyo-Sapporo, Tokyo-Hsin-king, Tokyo-Peking, Fukuoka-Nanking, Taihoku-Canton, Tokyo-Bangkok and Tokyo-Palau, the last three being opened in 1938 and 1939. The aggregate length of the routes extends as long as 30,000 kilometers in 1940.

Tokyo-Bangkok Regular Air Route Opens. Because of the successful results of three test flights made in the past, the Dai Nippon Airways Company decided to inaugurate the Tokyo-Bangkok regular air service. The Matsukaze (Mitsubishi-Type 1 transport plane) hopped off from Tokyo for Bangkok on its maiden flight on June 10, 1940, and landed safely at Bangkok on June 22 by way of Canton and Indo-China, thus stabilizing a regular air service between Japan and Thailand. Later, as a result of the improvement of Franco-Japanese relations, the air-liner has come to take a direct route via Hanoi and across French Indo-China from July 15, 1940.

South-Sea Line Announced. A regular air service linking Yokohama, Saipan and Palau is being conducted as a fortnightly return trip. The distance between Yokohama and Palau is being covered by a Kawanisi four-engined flying boat in two days, which is uncomparably faster than the regular steamship service which takes two full weeks or more to cover the distance.

Certainly, it is a matter of great joy for residents in the South Sea islands to be able to read Japanese papers from Tokyo on the same day of publication

and to enjoy looking at Japanese native flowers fresh from the garden.

With the object of further promoting the Japan-South Sea service, the Dai Nippon Airways Company is projecting an inter-island air service for connecting Saipan, Palau, Truk, Ponape, and Jaluit. Test flights are now being made by the company for the purpose.

Principal machines being used by Dai Nippon Airways Company are:

Douglas DC-3.
Douglas DC-2.
Lockheed 14 WG-3.
Mitsubishi Type I Transport.
Nakajima A T.
Mitsubishi Airspeed "Envoy."
Nakajima Fokker "Super."
"Universal."
Beechcraft C-17-E.
Heinkel HE-116.
Kawanishi Four-Engined Flying Boat.

CHAPTER XXV

SEA TRANSPORTATION

N.Y.K. Line

THE QUEEN OF THE SEAS



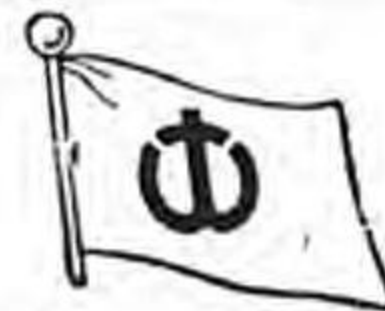
Founded in 1885,
the N.Y.K. Line has
carried millions of satisfied
travellers and an unaccountable
tonnage of precious cargoes to
the far-flung ports of the world,
maintaining an unbroken chain of world's
commerce and serving as Silent Ambassa-
dors of Good-Will among all the nations.

NIPPON YUSEN KAISYA

Head Office: Tokyo, Japan

Offices and Agents Throughout the World

Tel. Addresses:—
DAIKI Shanghai
DAIKI Tsingtao
DAIKI Tientsin
DAIKI Kobe



DAIKI Hongkong
DAIKI Yingkow
DAIKI Antung
DAIRENKISEN Tokyo

DAIREN KISEN KAISHA

(Dairen Steamship Co., Ltd.)

HEAD OFFICE: DAIREN

BRANCHES: Shanghai, Tsingtao, Tientsin, Kobe, Tokyo,
Hongkong, Yingkow, Antung.

AGENCIES: S. M. R., Japan Tourist Bureau, Thomas Cook &
Son, American Express Co., Compagnie Internationale des
Wagons-Lits, S. M. R. Information Offices and Yeiwa-Koshi.

FREIGHT SERVICE TO: EUROPE, AUSTRALIA, THE SOUTH
SEA ISLANDS AND JAPAN.

REGULAR SERVICE:

Dairen-Tsingtao-Shanghai	Sailing 2nd or 3rd day.
Dairen-Tientsin	Sailing every day.
Dairen-Keelung-Takao	Sailing every 10 days.
Dairen-Tsuruga-Fushiki-Niigata	Sailing every 10 days.

Combined through ticket between Shanghai and European
Points via Siberia and also through ticket of
S. M. R. and D. K. K. are to be issued.

CHUGAI KAIUN K.K.

(Chugai Ocean Transport Co., Ltd.)

President: Y. MASUDA

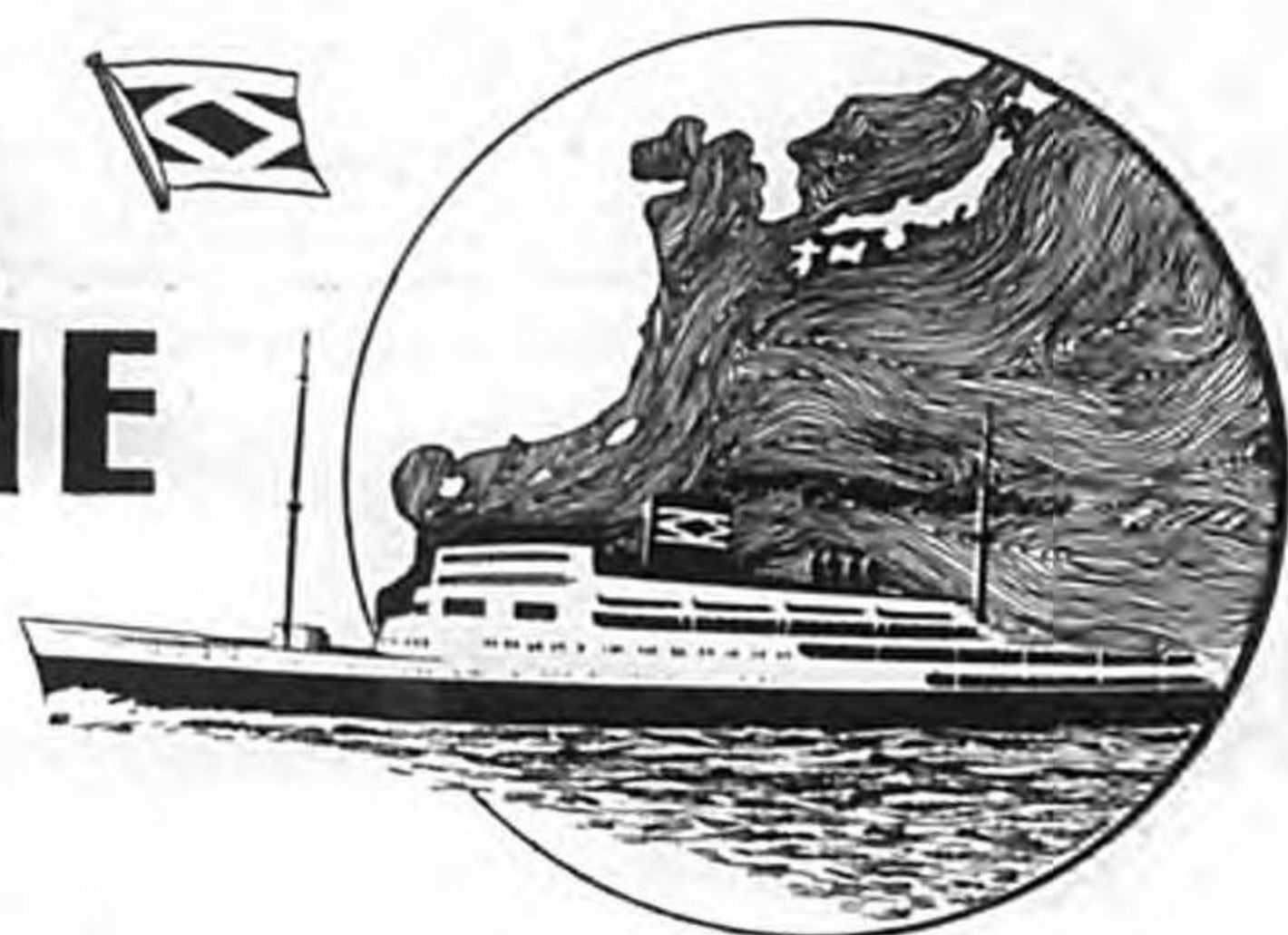
Marunouchi Building, Kojimachi-ku, Tokyo

Branch Office: Kobe



Oil Transported by us to Japan from America
and Dutch East Indies

TŌA LINE



Head Office:

Tokyo, Japan

**JAPAN---CHINA
REGULAR PASSENGER
& FREIGHT SERVICES**

PRINCIPAL BRANCHES:

Tokyo, Yokohama, Nagoya, Osaka, Kobe,
Mozi, Nagasaki, Taihoku, Dairen, Tientsin,
Tsingtao, Shanghai, Amoy & Etc.

CHAPTER XXV

SEA TRANSPORTATION

Historical Background

The dawn of Japan's history is associated with maritime activities. The national mythology is rich in stories of sea adventures. Later authentic records fully demonstrate the energy and spirit of the early Japanese, who had to fight their way through stormy seas in the primitive craft of those days. The period covered by the latter half of the sixteenth and the beginning of the seventeenth century marks the golden age of marine activity in Old Japan. This was in a great measure due to the stimulus received by the natives through the appearance of Portuguese and other foreign ships in Japanese waters. Japanese vessels not only were in evidence in South China and the South Sea Islands, but cruised the Pacific as far as Mexico and fought their way through the Indian Ocean and round the Cape of Good Hope to Europe. Military rulers encouraged maritime enterprises and many large vessels were built. Thus the shipping trade between Japan and the South Seas and India, carried on under letters patent and numbering no less than 200 ships at one time, engaged in commerce with 20 different countries, which were eventually dotted with regular Japanese colonies.

Ban on Shipping Activities Unfortunately, while the maritime prosperity of Japan was thus making progress by leaps and bounds, the Tokugawa Shogunate took the drastic measure of secluding the country and forbidding all foreign intercourse. Its first act was to place a strict ban on the propagation of Christianity in 1613. Subsequently, in 1634, all commercial relations with foreign countries were stopped, and in 1636 the construction of large ocean-going vessels was forbidden. For a period of more than two centuries thereafter the ocean trade of Japan was forcibly suspended.

The Well-timed Visit Commodore Perry's visit in 1853 was opportune, inasmuch as by this time many Japanese

amongst the intelligent classes were dimly aware of conditions outside Japan, and the Shogun's Government, amid much confusion of opinion, took a firm step and signed the treaty. This event was followed in 1854 by the conclusion of similar treaties with the leading nations of Europe. Commercial intercourse with foreign countries was thus resumed, and the time-worn restrictions on navigation and ship-building were withdrawn. Then was formed the nucleus of the present mercantile marine of Japan. The Shogun's Government, finding the old Japanese methods of ship-building and navigation utterly out-of-date, promptly decided upon introducing the ideas of the outside world. For this purpose, students were sent abroad, while foreign experts were engaged to work in Japan. A shipbuilding yard was established in Yokosuka, and a naval school in Nagasaki.

After the Meiji Restoration

The First Steamship Co. In the third year of Meiji the Government promulgated the Mercantile Marine Regulations. In the same year, the pioneer steamship concern was inaugurated and a new leaf in the history of the Japanese mercantile marine was turned. The first company to be incorporated was the Kwaiso Kaisha, or Forwarding and Transport Company, which was later renamed the Teikoku Yusen Joki Kaisha (Imperial Mail Steamship Co.) Mampel Kimura was one of the chief promoters. A regular service was maintained between Tokyo and Yokohama and between Osaka and Kobe. Yataro Iwasaki, founder of the Mitsubishi interests, incorporated a shipping company called the Tsukumo Shokai, later renamed the Mitsubishi Shokai, in 1870 and inaugurated a regular passenger service between Tokyo and Kochi in Shikoku, from which place Iwasaki hailed. Three steamers formerly owned by Lord Yamanouchi, former feudal lord of Tosa, were employed in the service. When the Japanese Government sent a punitive force against

Formosa in 1874, all foreign steamship companies interested in the Far Eastern shipping trade declared neutrality and rejected the Government's offer to charter their ships. Perplexed at this, the Government ordered the Mitsubishi Shokai and Teikoku Joki to offer their ships, and thus the transportation of troops was smoothly effected.

The N. Y. K. Comes into Existence Shigenobu Okuma, then Minister of Finance, and Toshimichi Okubo, then Home Minister, made efforts to organize the Yubin Kisen Mitsubishi Kaisha after the termination of the expedition. The two above-mentioned firms were dissolved and the Government's ships were handed over to the new company. The Mitsubishi interests made large profits under Government protection. Kaoru Inoué and Admiral Tsugumichi Saigo, who were Okuma's political opponents, organized a corporation to rival the Mitsubishi's as a means of overthrowing Okuma and ordered, in 1882, Eichi Shibusawa, Takashi Masuda and others to form a semi-Government shipping company under the name of the Kyodo Unyu Kaisha. Keen competition later ensued between the two and threatened to lead them to ruin. Consequently, the Government ordered them to effect a merger. In 1885 the Nippon Yusen Kaisha was incorporated through the investment of ¥5,000,000 by the Mitsubishi and ¥6,000,000 by the Kyodo Unyu. At the time of founding, the company owned 58 steamers with an aggregate of 68,700 tons. The Pacific Mail Steamship Company of America was then operating a regular line between Yokohama and Shanghai with the *s. s.* Golden Age, the Costa Rica and two other ships, all of which were purchased by the Japanese Government in 1874 for the transportation of Japanese soldiers on the expedition to Formosa. Iwasaki waged a freight war with the Pacific Mail at that time and finally purchased these four ships for \$8,000,000. This price included the Shanghai wharf now owned by the Nippon Yusen Kaisha at Whampoo.

The O. S. K. About this time the Osaka Shosen Kaisha was established in Osaka. It was then a small concern maintaining services in the Inland Sea of Japan, but later developed into a large company. The Nippon Yusen Kaisha, while maintaining the services originally inaugurated by its predeces-

sors, opened new lines to Korea and North China, and one between Shanghai and Vladivostok; and in 1891, it inaugurated the service between Kobe and Manila and commenced to despatch occasional ships to Australia. In 1892, the N. Y. K. Japan-Bombay service was opened, the first regular Japanese steamship connection with a far-away foreign country. The rapid progress of Japanese shipping is attested by the fact that in the beginning of 1891 the total tonnage owned in Japan was 100,000, and one year later this figure had increased by 10,000.

The Sino-Japanese War During the Sino-Japanese War of 1894-5, when the greater part of Japanese shipping space was requisitioned for transport purposes, a large number of steamers were purchased or chartered by Japanese owners and Japan, having complete command of the sea, was able to maintain its established oversea services. At the close of the war Japan found that its merchant marine had grown by 100 per cent compared with the pre-war figures. Meanwhile the Nippon Yusen Kaisha lost no time in consolidating its established lines and in 1896 it inaugurated three trunk lines, viz., the Yokohama-London-Antwerp line, the Hongkong-Japan-Seattle line and the Yokohama-Manila-Australia line. In 1898 the Tokyo Kisen Kaisha was established, and it maintained a regular fast service between Hongkong and San Francisco via Japanese ports with three fine new passenger ships. The Osaka Shosen Kaisha opened a new line on the Yangtze-kiang in 1898. In the following year, this company opened a line from Taiwan to Hongkong, via Amoy and Swatow. The increase in Japanese tonnage at that time was remarkable. Whereas, at the end of 1897, it amounted to only 270,000 tons, it suddenly increased at the end of 1898 to 477,000 tons, the ratio of growth continuing, until the gross tonnage of steamers of 1,000 tons and over at the end of 1903 amounted to 521,000.

Foreigners' Services Mention must not be omitted of the valuable contribution made by foreign experts to the development of the Japanese mercantile marine. Through the remarkable foresight of Iwasaki, not only foreign captains, officers, engineers and pursers were freely engaged afloat, but numerous experts, business and technical, were employed on shore to conduct the

business of the Nippon Yusen Kaisha. A large number of these foreigners remained in the company's service for a considerable time after its formation. Foremost among them were A. R. Brown, Alexander Macmillan, T. H. James, J. W. Ekstrand, W. H. Hasewell and Hector Frazer, whose names are still familiar to old timers in the Far Eastern shipping trade.

One noteworthy fact in connection with the development of the shipping business is the advance made by Japanese mariners. Japan imported the science of navigation from the West and early in the Meiji Era the captains, chief engineers and mates were mostly foreigners. When the Nippon Yusen Kaisha was first organized in 1884 the company owned 57 steamers with a total tonnage of 60,000 and employed about 175 foreigners, the number being increased to 224 during the Sino-Japanese War. During the Russo-Japanese War Japanese mariners were the recipients of much praise, and their credit was greatly raised. After the war, in 1907, the number of foreigners was reduced to 87 and by 1920 there was not a single foreign officer in a Japanese ship.

The Russo-Japanese War The Russo-Japanese War broke out early in 1904, and Japan found herself compelled to undertake transport work of the biggest magnitude ever known in her history. This situation naturally created the necessity of purchasing additional tonnage, with the result that at the end of 1903 the total merchant marine reached a little more than one million gross tons, and Japan thus ranked sixth among the great maritime Powers of the world. Through the expansion of trade after the war, sufficient employment was found for these steamers. The Toyo Kisen Kaisha opened its South American service before the war terminated. The Osaka Shosen Kaisha started in 1909 its Far East-Puget Sound service. Elsewhere the expansion was also pronounced, for in 1907 four large Japanese companies trading on the Yangtze-kiang pooled their interests and formed the Nisshin Kisen Kaisha (Japan-China Steamship Company) and the Osaka Shosen Kaisha in the meantime inaugurated the Tsuruga-Vladivostok and the Osaka-Kobe-Moji-Dairen lines. The general slump in the shipping trade which prevailed all over the world dur-

ing this period was felt in Japan, but the country was not so badly hit as to prevent the further growth of its shipping, for, at the end of the year when the World War broke out, the total gross tonnage of ships flying the Japanese flag was 1,590,000, of which 1,310,000 tons represented ships of more than 1,000 gross tons each. Turning to the share which Japanese merchant shipping contributed to its foreign commerce, it was found that, whereas, prior to the Sino-Japanese war (1894-5), only 10 per cent of imports and exports were carried by Japanese ships, the proportion increased to 40 per cent after the Russo-Japanese War (1904-5), and just before the commencement of the World War, it had grown to 48 per cent.

The World War An extensive dearth of tonnage and the consequent pressing demand for space all over the world, caused by the World War, created a unique situation for Japanese merchant shipping, so much so that the total gross tonnage suddenly swelled by a million tons within a brief period and the yearly shipbuilding capacity increased from 50,000 tons to a half million gross tons. The share contributed by Japanese vessels to the transportation of imports and exports increased to nearly 80 per cent, the remaining 20 per cent being carried by foreign ships. Many new shipping services to all corners of the globe were opened one after another, and, besides rendering distinguished service to the cause of the Allies, the Japanese mercantile marine maintained a regular fortnightly Japan-England mail service, and despatched extra ships to European waters during the war. Furthermore, in response to the call of the United States after that country entered the War a group of Japanese shipowners delivered a number of steamers aggregating 150,000 tons to the United States Government on charter at rates considerably lower than those which shipowners at that time could have obtained in the open market.

The inevitable aftermath of the war abnormalities—shipping depression—set in early in 1920, and this is still being felt all over the world. Japanese shipping in common with that of all other nations is undergoing a severe test of its perseverance and fortitude. Despite this Japanese shipping has considerably increased. The Toyo Kisen Kaisha transferred all of its Pacific ships to the

Nippon Yusen Kaisha, by which the latter became one of the greatest shipping companies of the world.

Present Conditions

At the end of 1938 there were 328 companies engaged in sea transportation business, with an aggregate amount of

capital of 711 million yen and reserve funds 176 million yen, raising profits of 80 million yen in that year. The number of companies engaged in shipbuilding was 161 capitalized at 372 million yen, with reserve funds amounting to 78 million yen, and they raised annual profits of 42.5 million yen.

BUSINESS CONDITIONS OF PRINCIPAL SHIPOWNERS AND DOCKYARDS

IN 1938 AND 1939

(Unit: ¥1,000)

	Paid-up Capital	Reserves	Net Profit	Rate of Profit	Rate of Dividend
Nippon Yusen Kaisha					
1938:					
A	92,250	75,622	5,312	24.3	6.0
B	92,250	78,837	5,590	21.6	6.0
1939:					
A	92,250	80,847	8,057	26.6	7.0
B	92,250	90,846	10,166	24.2	7.0
Osaka Shosen Kaisha					
1938:					
A	62,500	41,733	10,633	49.1	6.0
B	62,500	62,500	11,044	51.6	7.0
1939:					
A	62,500	51,633	13,526	62.6	7.0
B	62,923	57,079	13,589	61.5	8.0
Toyo Kisen Kaisha					
1938:					
A	11,000	192	788	51.0	10.0
B	11,000	442	994	45.3	10.0
1939:					
A	10,657	892	736	32.9	10.0
B	11,000	1,091	910	30.1	10.0
Nisshin Kisen Kaisha					
1938:					
A	10,125	—	(—)121	—	0
B	10,125	—	—	—	0
1939:					
A	10,125	—	—	20.5	0
Kokusai Kisen Kaisha					
1939:					
A	20,000	—	—	—	—
B	20,000	—	110	0.5	—
Mitsubishi Heavy Industry (Dockyard)					
1938:					
B	90,000	54,736	7,448	16.6	7.0
1939:					
A	99,781	60,483	9,409	18.9	7.0
B	110,384	68,127	9,902	17.9	7.0
Kawasaki Dockyard					
1938:					
A	80,000	839	4,545	14.4	2.0
B	80,000	1,067	4,470	14.2	2.0
1939:					
A	80,000	1,291	4,436	14.1	2.0
B	80,000	1,514	4,535	14.4	2.0
A	90,000	50,468	6,368	14.2	7.0

	Paid-up Capital	Reserves	Net Profit	Rate of Profit	Rate of Dividend
Uraga Dockyard					
1938:					
A	11,000	4,413	1,320	31.3	8.0
B	11,000	5,029	1,381	32.4	10.0
1939:					
A	11,000	6,416	1,481	34.2	10.0
B	11,405	7,220	1,585	34.8	10.0
Ishikawajima Dockyard					
1938:					
A	14,000	1,315	899	22.7	8.0
B	20,000	1,654	1,013	22.5	8.0
1939:					
A	16,000	2,061	1,150	21.9	8.0
B	19,803	2,501	1,457	20.4	8.0

Note: A denotes the first half and B the second half of the year.

LIST OF LARGE N.Y.K. VESSELS

	Gross Tonnage	Passenger Accommodation			
		1st Class	Cabin Class	2nd Class	Tourist Cabin
M.S. Kamakura Maru	17,526	240	—	95	—
S.S. Nitta Maru	17,163	127	—	88	—
S.S. Yawata Maru	17,000*	127	—	88	—
M.S. Asama Maru	16,975	239	—	96	—
M.S. Tatuta Maru	16,975	239	—	96	—
S.S. Taiyo Maru	14,458	—	91	—	241
M.S. Terukuni Maru	11,931	121	—	68	—
M.S. Yasukuni Maru	11,933	116	—	68	—
M.S. Hikawa Maru	11,622	—	76	—	69
M.S. Hié Maru	11,621	—	76	—	69
M.S. Helan Maru	11,615	—	76	—	69
S.S. Husimi Maru	10,936	86	—	38	—
S.S. Suwa Maru	10,672	83	—	38	—
S.S. Haruna Maru	10,421	83	—	40	—
S.S. Hakone Maru	10,420	83	—	40	—
S.S. Hakozaki Maru	10,413	83	—	40	—
S.S. Hakusan Maru	10,380	85	—	40	—
S.S. Kasima Maru	9,908	74	—	34	—
S.S. Katori Maru	9,849	42	—	110	—
M.S. Helyô Maru	9,816	42	—	—	80
S.S. Yamato Maru	9,656	61	—	217	—
S.S. Rakuyô Maru	9,419	42	—	—	51
S.S. Asahi Maru	9,327	63	—	220	—
S.S. Anyô Maru	9,257	—	24	—	47
S.S. Huzi Maru	9,130	38	—	165	—
S.S. Yosino Maru	8,990	18	—	177	—
S.S. Ginyô Maru	8,613	—	20	—	37
S.S. Atuta Maru	7,983	55	—	14	—
S.S. Kamo Maru	7,955	51	—	—	—
S.S. Kitano Maru	7,952	55	—	14	—

Ships under Construction

S.S. Kasuwara Maru	28,000*	220	—	120	—
S.S. Izumo Maru	28,000*	220	—	120	—
S.S. Kasuga Maru	17,000*	127	—	88	—
M.S. Miike Maru	11,400*	60	—	—	—
M.S. Misima Maru	11,400*	60	—	—	—

Note: (*) indicates approximate tonnage.

LIST OF LARGE O.S.K. SHIPS

	Gross Tonnage	Nominal Horse Power	Year Constructed
S.S. Arizona Maru	9,684	5,500	1920
M.S. Rio de Janeiro Maru	9,627	5,000	1929
M.S. Buenos Aires Maru	9,626	5,000	"
M.S. La Plata Maru	7,267	3,800	1925
M.S. Santos Maru	7,267	3,800	1925
M.S. Montevideo Maru	7,267	3,800	1926
S.S. Arabia Maru	9,480	5,500	1918
S.S. Africa Maru	9,476	5,500	"
S.S. Manila Maru	9,486	5,600	1915
S.S. Hawaii Maru	9,467	4,800	1915
S.S. Horai Maru	9,192	7,400	1912
S.S. Mizuho Maru	8,506	6,400	"
S.S. Takachiho Maru	8,154	7,100	1933
M.S. Argentina Maru	13,000	10,500	1939
M.S. Brasil Maru	13,000	10,500	1939
M.S. Hokoku Maru	10,500	10,000	1940
S.S. Seia Maru	6,659	4,200	1939
M.S. Nana Maru	6,757	4,200	1940
M.S. Toa Maru	6,732	3,300	1939
M.S. Hokai Maru	8,416	5,700	1932
M.S. Nankai Maru	8,416	5,700	1932
M.S. Sanyo Maru	8,360	5,000	1930
M.S. Kinai Maru	8,360	5,000	1930
M.S. Hokuriku Maru	8,360	5,000	1930
M.S. Tokai Maru	8,360	5,000	1930
S.S. Takasago Maru	9,347	8,600	1936
M.S. Aikoku Maru	10,500	10,000	1940
M.S. Kokoku Maru	10,500	10,000	1940
S.S. Nekka Maru	6,785	6,400	1934
S.S. Ural Maru	6,374	5,000	1928
S.S. Kokuryu Maru	7,369	6,100	1937
S.S. Oryoku Maru	7,363	6,100	1937
S.S. Kiturin Maru	6,783	6,400	1934

LIST OF KOKUSAI LINERS

	Deadweight Capacity	Main Diesel Engine	Maximum Speed
	Tons	B.H.P.	Knots
M.V. Kagu Maru	9,206	7,000	19.503
M.V. Kano Maru	9,731	7,600	19.016
M.V. Kasli Maru	9,400	7,000	19.435
M.V. Katuragi Maru	9,581	6,000	17.082
M.V. Kinka Maru	10,096	9,200	21.554
M.V. Kinryu Maru	10,142	9,200	20.004
M.V. Kinugasa Maru	9,485	7,000	19.175
M.V. Kirisima Maru	9,781	6,000	18.029
M.V. Kiyosumi Maru	9,849	7,600	19.165
M.V. Komaki Maru	9,779	7,600	19.583
M.V. Kongo Maru	9,801	7,600	19.636
M.V. Kurama Maru	10,294	4,050	15.978

Sea Transportation in 1940-41

The Marine Transportation Association

Law The law has been enacted on December 21, 1939, to ensure a healthy development of the marine transport business and to compel the shipping interests to organize an association for the furtherance of their common business, enforce voluntary control and mediate in the settlement of disputes. The law authorizes the Minister of Communications (a) to enjoin those engaged in the marine transport business to organize an association in case of necessity, (b) to enjoin non-members who are qualified for membership to adhere to the association's aims, (c) to approve the charter and by-laws of the association, (d) to instruct the association to install equipment necessary for its development and (e) to enjoin both the members and non-members to abide by the control to be enforced by the association. The Japan Shipowners' Association and the Marine Transport autonomous Federation hitherto had been exercising control over the marine transport business on a voluntary basis, but with no power to enforce their control over the non-members. The new legislation, however, authorizes the Minister of Communications to control both the members and non-members through the Marine Transport Association.

The Shipbuilding Industry Law This law which was put into operation on December 1, is aimed at placing the shipbuilding industry under government control in order to stabilize it by giving proper protection and encouragement and to lower shipbuilding costs, which are comparatively high in this country compared with the international level, and make it possible to build superior vessels at a low cost. Under the provisions of the new legislation, the shipbuilding industry is supervised and protected by the Government in the following way:

(a) Any one who desires to engage in shipbuilding must apply to the Government for permission.

(b) The Government is authorized to enjoin the shipbuilding companies to standardize parts of their enterprises, hulls and their parts and to prohibit the manufacture or the use of those parts that fall below the standards.

(c) The shipbuilding companies are permitted to issue debentures beyond the

amount stipulated by commercial law.

(d) The shipbuilding companies may sell to the Government the ships, engines and their parts, which they have assembled; but they are required to obtain Government permission for dismantling or suspending operation of their technical apparatus and equipment.

(e) The Government is empowered to enjoin the shipbuilding companies to alter production costs, repair charges and selling prices or selling terms for ships, hulls, engines, fittings, their parts and accessories; and to enjoin them to install new technical equipment and to re-condition or improve the old.

(f) The Government is also authorized to grant subsidies for shipbuilding. In case of special necessity for the maintenance of the shipbuilding industry, the Government is empowered to subsidize shipbuilding companies or those who place orders with them for the construction of new vessels.

(g) The new legislation also stipulates for the organization of a shipbuilding association and a federation of shipbuilding associations.

The European War on Shipping Influenced by the inactive world market, the deep-sea market of Japanese shipping circles in 1939 set out to be dull, with gradual decrease in the number of ships placed on routes and fluctuation of freight rates. In September, however, the shipping market began to assume a stronger tone owing to the outbreak of the European War. Thus, with the jump in freight and charter rates on the oversea services, all rates of charge of Japanese deep-sea services simultaneously recorded a sudden rise.

Since the beginning of the European War freight rates in all countries were raised by 30 to 250 per cent, and union freight rates on important routes became 20 to 60 per cent higher than the former rates. In the tramp market a temporary lull was followed by another jump in December. The pre-war freight rates to Europe which were as low as 20 to 30 shillings rose in three or four months to a high of about 100 shillings. Japanese pre-war transportation rate for soya beans from Dairen to Europe of approximately 25 shillings recorded a tremendous jump to 140 shillings or five to six times the former rate at the end of the year.

However, notwithstanding the high tone of the oversea market, since an enormous volume of shipping bottoms were required to consolidate and maintain the near-sea transport capacity, the Japanese shipping interests could not immediately adopt a positive policy in extending their power on the oversea shipping lanes nor in catching the golden opportunity for acquiring foreign currencies through services abroad. But later due to the control of ship-routing and the increase of shipping bottoms by the cooperation of the Government and shipping companies, there was a gradual increase in the number of ships for overseas services, and at the close of the year the tonnage of tramp steamers placed on deep-sea routes amounted to 1,240,000 tons, a tremendous increase of approximately 250,000 tons as compared with the tonnage in the early part of the year.

The Near-Sea Shipping On the other hand, the near-sea market enjoyed an exceedingly busy year. In order to perfect the transportation of military supplies to the Continent and for the consolidation and maintenance of the transport capacity to assure the supply of materials in connection with the amplification of the national productive power, the demand for shipping bottoms sharply increased. The pressing demand was due primarily to the increased movement of important cargoes consisting of coal, ores, miscellaneous goods, etc. When a lull occurred in freight movement in the earlier part of the year, the return to the market of a large number of specially commissioned vessels and the placing into service of newly-constructed ships caused a slight temporary surplus of bottoms. In the latter half of the year, however, the first zone of the near-sea service (between 113°-170° E. Long. and 21°-03° N. Lat.) alone was augmented by the addition of 600,000 tons of shipping bottoms, not to speak of the other zones, surpassing the 2,000,000 ton level in July, the remarkable record figure since the summer of 1929. Yet the market absorbed it, leaving hardly any surplus of bottoms.

In spite of the fact that the home market continued to be brisk, later owing to the return to the market of special service ships and ships in northern waters or to the addition of new ships to the service and on account of

strengthened control, the shippers were able to send large- and medium-sized ships on the busy overseas routes to some extent with the approach of the close of the year.

Distribution of Tramp Ships in 1940

The aggravation of the international situation has brought about an acute state of affairs in regard to the distribution of tramp ships in this country. This situation has been evident in the increasing concentration of trampers on coastal routes (1st-3rd zones and South Seas zone). In conformity with the dominant national requirements of the times, namely, the early settlement of the China Affair and the achievement of self-sufficiency within the co-prosperity sphere, the proper distribution of bottoms has been stressed. As a result, an unprecedented record of ship-distribution was established in 1940, the distribution, at the end of 1940, increased by 245,000 tons for the Coastal zones, while it decreased by 178,000 tons for ocean transportation, as compared with the previous year. Such a tendency, however, was not attributable merely to the expansion of transportation in this country. With the outbreak of the European War, the majority of ships of the belligerent Powers heretofore engaged in Pacific routes, were called back to their home countries, and the task of replenishing the shortage of bottoms fell upon the shipping companies in this country.

The same fate which befell the shipping of belligerent countries in the Pacific has faced Japanese shipping in belligerent zones. As the security at sea was threatened by the outbreak of the European hostilities, Japanese ships bound for Europe and Africa were compelled to withdraw from those routes and the Japanese ships have completely ceased to make trips to Europe since May 1940, and to America in August 1941 as a result of American freezing of Japanese assets on July 26.

Emergency Measures For the consolidation and maintenance of transport capacity in connection with the China Affair and the adjustment of shipping rates, the Autonomous Shipping Federation was early organized among the principal shipping companies. With the close cooperation of Government officials an autonomous control was effected particularly in regard to shipping and charter rates.

Standard rates were fixed and strictly enforced, in accordance with the State low-price policy. But entering into 1939 the activity of the near-sea market became more pronounced, manifesting the acute shortage of bottoms, and smaller shipowners began to addlet to under-handed dealings, revealing the defect of the autonomous control.

Under the circumstances, officials of the Communications Ministry strengthened the shipping control in the latter part of August by organizing the Shipping Control Committee evolving from the Japan Shipowners' Association and the Autonomous Shipping Federation renamed as Shipping Federation and the Smaller S. S. Control Committee evolving from the Near-Sea Steamship Federation.

The newly-established Shipping Control Committee, which was placed into operation on September 1, with the purpose of regulating the harmonization of marine charges and charter rates for controlled management of shipping business in consonance with the national policy aimed not merely to control the shipping charges, charter rates, etc. as heretofore, but primarily to strengthen control in the distribution of ships and its rationalization, intensifying the trend of Government control rather than the hitherto autonomous control.

The rise in shipping rates had been thus checked considerably by the adoption of the fixed standard rates when it was completely checked by virtue of the Ordinance issued in November to suspend prices and charges at the level of September 18. In the latter part of December an Imperial Ordinance was promulgated concerning the enforcement of the Marine Transportation Association Law.

On February 1, 1940, the Ordinance concerning the Control of Sea Transportation was issued by virtue of Article 8 of the National General Mobilization Law to invest the Government with the power to issue orders to speed up ship-repairing, to charter ships, to hasten shipment of goods and to put shipbuilding and the charter of foreign vessels under a permission system.

The Japan Shipowners' Association was dissolved on May 11, 1940, and the new Japanese Sea Transportation Association was organized by 197 shipowners of Japan, in accordance with the provisions of the Marine Transportation

Association Law, while the Shipping Control Committee and the Near-sea Shipping Federation were reorganized by virtue of the same law.

On November 1, 1940, the Sea Transportation Central Control Association was organized as a juridical person under the Marine Transportation Association Law, at the Marunouchi Industrial Club in Tokyo. The association consists of 12 blocs, including 8 blocs of trampers, 2 blocs of liners, 1 bloc of oilers and 1 bloc of small steamers. Noboru Ohtani, President of N.Y.K., was appointed the Chairman of the Trustees.

On November 8, 1940, the Sea Transportation Promotion Society, a juridical person, was organized with the purpose of making investigations on important matters relating to sea transportation, establishing facilities for studying shipping science, propagating shipping idea among the people and giving aids to shipping enterprises or investigations on shipping. The proposed amount of funds which reaches 20 million yen shall be contributed by shipping and shipbuilding companies all over the country, a half of the amount shall be kept as endowment fund, while another half is to be expended for establishing facilities for scientific study of ships and shipping business.

At the first general meeting of the Japanese Sea Transportation Association held at Kobe on May 21, 1941, the Communications Minister Murata revealed the Governmental intention of further strengthening State control of shipping business in Japan in order to get enough volume of bottoms for the transportation of important raw materials, fertilizers, comestibles and goods required for the expansion of productivity. According to his statement Japan will require at least 10 per cent increase of shipping capacity in 1941, even if all the bottoms are employed for the transportation of important goods. A large portion of bottoms is required for military purposes, the charter of foreign vessels is nearly impossible and the conveyance of Japanese goods by foreign liners has practically stopped. The Minister, therefore, earnestly requested the full cooperation of all shipping corporations, while the Government will endeavor to effect proper control of shipping, to get as much bottoms by chartering foreign vessels, to promote shipbuilding enterprises, and to improve trade ports.

Since then the international situation of Japan's shipping business has underwent a radical change on account of American freezing of Japanese assets and transactions on July 26, and com-

plete State control or management of all phases of the shipping business is inevitable to come in the latter half of 1941.

Warehousing

History

Since warehousing depends on the storing of large quantities of goods, transportation facilities are the factors which influence its success, and expansion of one calls for an expansion of the other and, in Japan, it was the development of transport facilities in the days of Meiji which gave rise to the modern warehousing business.

Warehouses of kinds have always existed. Emperors in olden times kept rice and cereals in warehouses for military purposes. Later, cereals were kept to provide for relief of the people in case of poor crops, but in either case, the warehouses were used for military or political, not commercial, purposes. When the Tokugawas came to rule the country as Shoguns about three hundred years ago, both Yedo (present Tokyo) and Osaka became great cities where trade and commerce flourished. Transportation by sea developed, and many feudal lords came to reside in these cities, bringing with them, or having sent to them, the agricultural products of their country districts. The produce was stored at the lords' residences, which became, in a sense, public warehouses. The produce was sold by public tender and to the successful bidder a memorandum was given against receipt of payment in cash. This memorandum was equivalent to the warehouse receipt of the present day, and the holder of the memorandum was authorized to keep his cereals in the warehouses for the time stipulated on it. Loans were often raised with memoranda as collaterals.

After the Restoration, owing to development of commerce and activity in the movement of goods, many warehouse businesses were started, the first company to operate on a modern basis being the Soko Kaisha in Fukagawa, Tokyo, established in 1881 with a capital of ¥65,000. Dissolution took place 3 years later. In Osaka, the Konoi family organized the Osaka Soko Kaisha with a capital of ¥200,000 in 1882. In

1883, the Sanbashi Kaisha in Kobe, and in 1884, the Otsu Soko Kaisha in Otsu in Shiga prefecture, were established. In 1886, the Tokyo Soko Kaisha, Ltd., was founded by the Iwasaki family. After that year there was no great change until after the Sino-Japanese War, when with increased foreign trade and improved transportation facilities by land and sea, the number of warehouse companies rapidly increased. In 1906, there were 536 people engaged in the warehouse business, either on private account or on an incorporated basis.

Present State of the Business

At the end of 1939 the number of warehouses managed by the member companies of the Japan Warehouse Association was 185, the value of commodities stored, being, on the average throughout the year ¥818,183,000. The monthly average for the first half of 1940 was ¥1,126,170. According to an investigation made by the Ministry of Commerce and Industry, the number of warehouse managements in the country at the end of 1938 totalled 456, capitalized at ¥182,736,977, and profit gained ¥6,059,511.

Along with the progress of the new structure of national economy, the Japan Warehouse Association was dissolved and the new Japan Warehousing Association was organized on June 3, 1941, with the purpose of improving the business conditions by putting all the warehousing enterprise in Japan proper and overseas territories under its control, which shall be enforced in conformity with the national economic policy. The number of member companies is 605 or over 80 per cent of the total number of warehousing companies in the Empire, the floorage owned comprises 1,250,000 tsubo.

Value of Commodities The quantity and value of commodities stored in the warehouses were as follows:

STOCKS IN WAREHOUSES IN JAPAN PROPER

(According to the Japan Warehouse Association)

Year	Average			End of June			End of December		
	Ware-houses	1,000 Parcels	Value ¥1,000	Ware-houses	1,000 Parcels	Value ¥1,000	Ware-houses	1,000 Parcels	Value ¥1,000
1931	96	22,322	432,715	96	22,113	458,917	96	24,134	410,988
1932	97	26,732	510,957	98	29,712	546,683	98	23,134	486,144
1933	101	27,041	577,555	99	28,901	629,965	105	28,892	585,085
1934	107	37,467	719,276	108	40,208	775,846	107	33,016	661,809
1935	108	31,750	645,913	107	33,449	686,155	111	27,284	537,809
1936	127	29,461	614,381	114	30,935	683,639	155	26,026	539,635
1937	173	33,020	807,692	175	34,045	936,759	183	33,550	722,408
1938	186	33,933	730,448	187	35,691	762,675	188	30,967	718,828
1939	188	31,327	818,183	188	32,469	862,841	185	29,947	893,452

Stocks in Warehouses by Districts

End of	Tokyo-Yokohama District			Kobe-Osaka District			Other Districts		
	Ware-houses	1,000 Parcels	Value ¥1,000	Ware-houses	1,000 Parcels	Value ¥1,000	Ware-houses	1,000 Parcels	Value ¥1,000
1931	19	6,020	159,453	14	9,581	164,500	63	8,532	87,033
1932	20	6,782	182,114	14	8,849	213,263	64	7,492	90,765
1933	21	7,337	187,227	14	11,350	270,406	70	10,204	127,451
1934	21	8,770	202,383	14	10,670	297,127	72	13,575	162,293
1935	20	6,314	165,953	16	8,339	217,798	75	12,630	154,158
1936	24	5,808	134,335	19	7,913	254,411	112	12,305	149,889
1937	24	6,054	186,143	21	9,822	302,009	138	17,674	234,256
1938	27	5,564	199,322	21	8,801	279,648	140	16,602	239,858
1939	28	5,662	245,945	20	9,387	344,874	137	14,893	302,634

(Note: Stocks in warehouses at the end of June 1940 were valued at 1,225.7 million yen, the Tokyo-Yokohama and Kobe-Osaka districts comprising 848.4 million yen.)

STOCKS IN WAREHOUSES BY IMPORTANT COMMODITIES

(Quantity in 1,000 parcels)

At the end of	1931	1932	1933	1934	1935	1936	1937	1938	1939
Rice	10,386	9,966	14,381	18,630	9,714	6,525	7,729	6,906	2,299
Other cereals & flour	1,741	1,384	2,118	2,267	2,870	2,870	3,804	3,802	5,972
Sugar	1,597	2,637	2,156	818	910	1,011	1,420	654	605
Foodstuffs	1,911	1,464	1,493	2,373	2,776	3,914	3,264	3,257	3,177
Cocoon	269	246	338	218	211	298	369	306	374
Cotton	83	242	368	383	127	303	149	117	152
Wool, etc.	75	115	153	126	139	77	114	88	51
Yarns	309	212	194	223	245	173	547	535	320
Textiles	219	165	305	301	1,162	362	961	817	1,074
Paper and materials	1,022	541	418	680	810	720	71	679	688
Fertilizers & materials	3,026	2,400	1,959	1,610	2,127	2,550	2,738	2,522	2,459
Iron & metal manufactures	1,856	1,603	3,303	2,809	3,452	3,826	5,027	5,502	5,308
Chemicals, dyestuff, fats	605	470	472	572	914	1,181	1,017	852	832
Total	24,134	23,134	28,892	33,016	27,284	26,026	33,550	30,967	29,947

SEA TRANSPORTATION

(Value in ¥1,000,000)

At the end of	1931	1932	1933	1934	1935	1936	1937	1938	1939
Rice	77.2	86.7	122.3	198.2	108.7	75.3	89.5	87.1	40.2
Other cereals & flour	6.4	14.6	9.5	15.3	19.3	27.9	36.6	38.4	82.2
Sugar	22.2	46.9	39.5	12.4	15.1	15.3	26.9	12.5	11.0
Foodstuffs	24.0	21.0	18.1	30.7	35.4	43.5	43.0	53.0	55.3
Cocoons	10.6	15.2	18.2	9.6	15.2	17.2	20.1	16.6	47.4
Cotton	9.6	46.1	68.1	82.7	22.8	68.3	22.8	8.4	9.9
Wool, etc.	21.6	43.9	35.1	37.2	21.1	22.2	41.5	26.1	15.2
Yarns	119.2	126.6	123.3	115.8	102.3	77.3	103.4	94.9	82.3
Textiles	24.9	21.1	44.2	45.1	49.4	43.9	81.4	142.3	184.6
Paper & materials	42.6	29.0	22.2	25.5	31.3	29.6	41.9	37.9	31.0
Fertilizers & materials	17.0	12.7	7.6	6.6	9.6	15.5	19.3	15.1	19.4
Iron & manufactures	17.1	14.6	27.4	22.6	36.0	34.9	73.0	77.7	121.8
Chemicals, dyestuff, fats	10.7	9.3	13.7	12.9	17.5	21.4	32.8	30.4	34.2
Others	21.0	20.1	26.5	33.7	37.3	48.2	89.7	77.8	158.3
Total	410.9	486.1	585.0	661.8	537.8	539.6	722.4	718.8	893.4

CHAPTER XXVI

LABOR AND LABOR MOVEMENTS

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CHAPTER XXVI

LABOR AND LABOR MOVEMENTS

Factories and Laborers The number of factories where more than 5 operatives are employed in Japan proper at the end of 1939 was 137,422, an increase of 25,090 or 18.2 per cent as

compared with the previous year.

The number of laborers employed in those factories was 3,766,709 gaining 548,994 or 17.0 per cent over the previous year. Details follow:

INDUSTRIAL STATISTICS FOR 1939

As Compared with the Previous Year

(Compiled by the Ministry of Commerce and Industry)

	1938	1939	Rate of Increase
Number of Factories:			
Metal	11,183	11,603	3.8
Machinery	17,570	23,067	31.3
Chemical	6,349	9,005	41.8
Gas and electric	669	672	0.4
Ceramic	5,231	6,686	27.8
Textile	32,618	36,871	13.0
Lumber and wood-work	10,629	13,111	23.4
Foodstuff	16,944	22,737	34.2
Printing and binding	3,932	3,777	3.9
Miscellaneous	7,207	9,893	37.3
Total	112,332	137,422	22.3
Number of Laborers:			
Metal	380,594	436,386	14.7
Machinery	860,431	1,126,568	30.9
Chemical	337,921	399,214	18.1
Gas and electric	10,517	12,034	14.4
Ceramic	111,675	139,707	25.1
Textile	1,045,538	1,063,387	1.7
Lumber and wood-work	113,823	152,180	33.7
Foodstuff	190,697	229,683	20.4
Printing and binding	63,568	66,186	4.1
Miscellaneous	102,951	141,364	37.3
Total	3,217,715	3,766,709	17.1
Value of Products (In ¥1,000):			
Metal	4,694,405	5,472,090	16.6
Machinery	3,821,881	5,421,378	41.9
Chemical	3,513,748	4,160,975	18.4
Gas and electric	47,190	69,243	46.7
Ceramic	431,765	572,034	32.5
Textile	4,200,228	4,791,534	14.2
Lumber and wood-work	457,302	719,847	57.4
Foodstuff	1,786,075	2,331,919	30.5
Printing and binding	281,169	297,480	5.8
Miscellaneous	433,251	532,624	20.9
Total	19,667,219	24,360,129	23.7
Working Hour in a Year (Unit: 1,000):			
Metal	1,145,251	1,344,625	17.4
Machinery	2,534,835	3,428,125	35.2
Chemical	1,091,387	1,215,682	11.4
Gas and electric	39,522	43,970	11.3
Ceramic	331,377	403,091	21.6

LABOR AND LABOR MOVEMENTS

	1938	1939	Rate of Increase
Textile	3,249,247	3,263,814	0.4
Lumber and wood-work	336,167	433,147	28.8
Foodstuff	460,581	577,513	25.4
Printing and binding	207,738	214,203	3.1
Miscellaneous	309,840	392,582	26.7
Total	9,705,952	11,316,755	16.6
Aggregated Wages Paid (In ¥1,000):			
Metal	251,976	318,621	26.4
Machinery	499,497	738,857	47.9
Chemical	155,968	194,309	24.6
Gas and electric	9,283	10,617	14.4
Ceramic	53,659	73,034	36.1
Textile	285,900	339,171	18.6
Lumber and wood-work	49,927	78,383	57.0
Foodstuff	62,130	82,710	33.1
Printing and binding	37,642	41,656	10.7
Miscellaneous	36,022	49,976	38.7
Total	1,442,069	1,927,339	33.7

Unemployment The first thorough investigation on unemployment in Japan was made at the national census of October 1, 1935; the number of jobless laborers and salaried-men at that time was 322,527. Annual estimates had been made by the Social Bureau since 1929, based on the reports sent in by local governments at the beginning of every month. The number had increased from 268,000 in September 1929 to 505,000 in September 1932. But the tendency turned at the end of 1932

as the result of the Government's emergency measures and an increased demand for labor in the heavy industries and an increase in the number of men called up for the services; the number of unemployed fell to 270,000 on December 1, 1937, 227,000 on November 1, 1938, 139,000 on November 1, 1939 and 124,000 on September 1, 1940. The rate of decrease of unemployment is greatest for factory and mine laborers as is shown below:

UNEMPLOYMENT BY KINDS OF LABOR

(Compiled by the Welfare Ministry)

(Unit: 1,000)

	Total		Salaried Men		Rate
	Investigation made on	Unemployment	Investigation made on	Unemployment	
Dec. 1931	7,047	470	1,664	77	4.65
Dec. 1932	7,263	463	1,692	83	4.94
Dec. 1933	7,410	378	1,720	69	4.01
Dec. 1934	7,517	360	1,738	67	3.88
Dec. 1935	7,778	351	1,787	68	3.82
Dec. 1936	7,919	323	1,829	66	3.58
Dec. 1937	8,012	270	1,859	59	3.16
Nov. 1938	7,910	227	1,880	49	2.62
Nov. 1939	8,296	139	1,877	27	1.43
Sept. 1940	8,296	125	1,870	26	1.34

	Laborers		Others		Rate
	Investigation made on	Unemployment	Investigation made on	Unemployment	
Dec. 1931	1,665	188	3,717	204	5.50
Dec. 1932	1,781	193	3,788	185	4.91

LABOR CONDITIONS

	Day-laborers		Rate	Others		Rate
	Investigation made on	Unemployment		Investigation made on	Unemployment	
Dec. 1933	1,789	183	10.24	3,899	126	3.25
Dec. 1934	1,785	176	9.89	3,992	116	2.92
Dec. 1935	1,816	169	9.34	4,174	113	2.72
Dec. 1936	1,839	155	8.43	4,251	103	2.41
Dec. 1937	1,864	130	6.96	4,289	82	1.90
Nov. 1938	1,837	106	5.78	4,193	71	1.69
Nov. 1939	1,746	75	4.31	4,674	37	0.78
Sept. 1940	1,723	66	3.82	4,703	32	0.68

Labor Exchanges The conditions of labor exchanges are mentioned in Chapter XXX.

Wages

According to investigations made by the Ministry of Commerce and Indus-

try, the average wage of factory laborers per hour was 15 sen in 1938, an increase of 2 sen as compared with the preceding years. The lowest 9 sen was to be found among textile industry laborers, for a large number of women and juvenile workers are to be found in this industry. Details follow:

Industry	Aggregate Labor Hours	Total Amount of Wages (In yen)	Per Hour Wage (In sen)
Textile	3,054,272,247	264,602,972	9
Metal	1,142,356,056	251,560,416	22
Machinery, tools, etc.	2,534,835,774	499,497,415	20
Ceramic	310,354,575	50,164,089	16
Chemical	1,040,565,694	149,391,688	14
Lumber and woodworking	336,167,173	49,927,237	15
Printing and binding	207,738,886	37,642,876	18
Foodstuff	460,581,895	62,130,239	13
Gas and electric	39,522,528	9,283,650	23
Miscellaneous	605,718,675	67,808,609	11
Total and average	9,732,113,503	1,442,009,191	15

AVERAGE DAILY WAGES OF LABORERS

(In 13 largest cities)

(Compiled by the Ministry of Commerce and Industry)

Kind of Employment	(In Yen)					
	1934	1935	1936	1937	1938	1939
Textile industry:						
Silk-reeler (Female)	0.62	0.64	0.65	0.68	0.71	0.80
Cotton-spinner (Female)	0.67	0.68	0.68	0.74	0.77	0.85
Silk-thrower (Female)	0.63	0.64	0.63	0.69	0.75	0.82
Cotton-weaver (Machine) (Female)	0.65	0.73	0.68	0.71	0.74	0.85
Silk-weaver (Hand) (Female)	0.24	1.37	1.32	1.23	1.18	1.35
Hosiery-knitter (Male)	1.59	1.59	1.41	1.24	1.42	1.75
" " (Female)	0.66	0.67	0.66	0.68	0.71	0.84
Metal, machine and tool industry:						
Lath-man	2.56	2.58	2.52	2.65	2.75	2.83
Finisher	2.46	2.51	2.49	2.57	2.61	2.82
Founder	2.71	2.72	2.64	2.76	2.92	3.05
Blacksmith	2.45	2.44	2.41	2.72	2.88	3.17
Wooden-pattern maker	2.57	2.61	2.54	2.79	2.91	2.87
Kiln industry:						
Potter	1.39	1.36	1.45	1.59	1.66	1.88

Kind of Employment	1934	1935	1936	1937	1938	1939
Glass-maker	1.68	1.67	1.70	1.72	1.82	2.08
Cement-maker	2.05	2.04	2.03	2.19	2.31	2.54
Brick-maker (Shape)	1.27	1.25	1.25	1.32	1.41	1.81
Tile-maker (Shape)	1.50	1.54	1.51	1.65	1.58	2.05
Chemical industry:						
Vitriol-maker	2.11	2.17	2.11	2.18	2.36	2.53
Match-maker (Male)	1.04	1.11	1.18	1.25	1.35	1.56
" " (Female)	0.50	0.52	0.53	0.58	0.62	0.67
Oil-presser	1.94	1.97	1.92	2.03	2.01	2.29
Japanese-paper maker	1.48	1.46	1.44	1.55	1.69	1.89
Foreign-style paper maker	1.71	1.75	1.75	1.87	1.92	2.08
Leather-maker	2.38	2.35	2.49	2.61	2.86	3.18
Foodstuff industry:						
Flour-miller	1.88	1.92	1.90	1.89	2.01	2.16
Saké-brewery worker	1.51	1.53	1.58	1.59	1.69	1.94
Soy-brewery worker	1.47	1.45	1.42	1.45	1.49	1.67
Sugar-refinery worker	2.34	2.35	2.50	2.66	2.75	2.96
Confectioner	1.46	1.47	1.45	1.54	1.65	1.84
Canner	1.22	1.21	1.25	1.38	1.52	1.73
Clothing industry:						
Tailor (for European clothes)	1.83	1.79	1.77	1.87	1.96	2.13
Shoe-maker	1.77	1.81	1.82	1.91	2.05	2.18
Wooden-clog maker	1.33	1.35	1.40	1.54	1.70	1.96
Engineering and constructional work:						
Carpenter	1.92	1.93	1.99	2.20	2.35	2.68
Plasterer	2.13	2.16	2.22	2.41	2.55	2.86
Stone-mason	2.33	2.40	2.46	2.66	2.82	3.20
Brick-layer	2.31	2.40	2.43	2.59	2.74	3.17
Roofing-tile layer	2.40	2.41	2.50	2.70	3.03	3.25
Painter	2.10	2.12	2.14	2.27	2.41	2.69
Wood and bamboo work:						
Sawyer (Machine)	1.55	1.56	1.56	1.64	1.79	2.11
Joiner	1.72	1.76	1.80	1.97	2.11	2.48
Lacquerer	1.62	1.62	1.60	1.66	1.74	1.91
Floor-mat maker	1.79	1.84	1.89	1.96	2.07	2.29
Printing and book-binding:						
Compositor	2.17	2.21	2.20	2.24	2.21	2.21
Book-binder	1.61	1.72	1.75	1.78	1.89	1.96
Stevedores and daily laborers:						
Stevedore	2.59	2.66	2.57	2.89	3.14	3.48
Day laborer (Male)	1.31	1.33	1.33	1.43	1.58	1.97
" " (Female)	0.78	0.78	0.77	0.82	0.90	1.09

AVERAGE DAILY WAGES OF WORKERS EMPLOYED IN
TRANSPORTATION AND COMMUNICATIONS

(Average of 27 Prefectures)

(In yen)

	1936		1937		1938	
	Male	Female	Male	Female	Male	Female
General Average	2.01	1.03	2.07	1.11	2.03	1.14
Land transportation						
Railway	2.01	1.03	2.04	1.03	1.97	1.02
Electric railway	2.19	1.32	2.30	1.43	2.38	1.49
Bus	2.66	1.28	2.81	1.36	2.84	1.41
Sea transportation						
Ocean	1.95	—	2.08	—	2.22	—
	2.26	—	2.49	—	2.82	—

	1936		1937		1938	
	Male	Female	Male	Female	Male	Female
Near seas	1.78	—	1.86	—	1.92	—
Coastal	1.44	—	1.48	—	1.56	—
Forwarding	1.62	0.75	1.62	0.72	1.68	0.68
Communications	1.47	—	1.57	1.01	1.62	1.06
Clerks	1.27	1.07	1.34	1.13	1.36	1.16
Postmen	1.69	1.16	1.83	1.30	1.92	1.40
Engineers	1.35	—	1.46	—	1.48	—
Telephone clerks	—	0.92	—	0.99	—	1.04
Operatives	1.53	—	1.62	—	1.68	—

AVERAGE DAILY WAGES OF WORKERS EMPLOYED IN
FARMING AND SERICULTURE

(In yen)

	Wages of Workers Employed in Farming									
	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
General index numbers	77	59	54	56	56	60	64	73	84	113
Workers by the year										
Male										
Actual	0.57	0.47	0.42	0.44	0.44	0.48	0.50	0.60	0.76	0.83
Index numbers	77	61	56	59	59	64	67	79	87	109
Female										
Actual	0.41	0.33	0.29	0.32	0.30	0.32	0.35	0.42	0.48	0.62
Index numbers	70	56	51	55	52	56	62	72	81	106
Workers by the season										
Male										
Actual	1.25	0.95	0.85	0.89	0.88	0.95	1.00	1.14	1.33	1.89
Index numbers	82	63	58	60	60	64	67	75	86	119
Female										
Actual	0.96	0.72	0.66	0.69	0.69	0.78	0.80	0.92	1.01	1.45
Index numbers	79	61	56	58	58	64	65	75	85	117
Workers by the day										
Male										
Actual	1.14	0.86	0.77	0.79	0.79	0.85	0.89	1.00	1.18	1.65
Index numbers	76	57	52	53	53	57	60	67	80	112
Female										
Actual	0.87	0.64	0.55	0.57	0.61	0.65	0.67	0.79	0.94	1.29
Index numbers	77	55	50	50	54	57	61	71	84	115

N.B. Wages per day are calculated by averaging wages, and amounts paid in kind are estimated in equivalent money values. The average is the simple arithmetical average. Base: 1921-23=100

Wages of Workers Employed in Sericulture

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
	General index numbers	78	64	59	64	64	69	73	77	87
Workers by the year										
Male										
Actual	0.73	0.59	0.53	0.58	0.57	0.61	0.64	0.67	0.85	1.07
Index numbers	83	68	65	74	73	77	81	84	89	115
Female										
Actual	0.51	0.38	0.37	0.41	0.41	0.44	0.48	0.51	0.60	0.83
Index numbers	81	60	60	75	73	75	80	88	82	117
Workers by the season										
Male										
Actual	1.05	0.89	0.81	0.86	0.84	0.95	0.98	0.98	1.27	1.72
Index numbers	75	64	57	60	60	66	68	68	91	122

LABOR AND LABOR MOVEMENTS

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Female										
Actual	0.84	0.67	0.62	0.65	0.66	0.74	0.79	0.81	0.95	1.26
Index numbers	81	65	60	61	63	70	74	76	90	122
Workers by the day										
Male										
Actual	1.09	0.93	0.86	0.89	0.88	0.96	1.01	1.07	1.30	1.76
Index numbers	70	60	55	56	56	61	65	69	84	110
Female										
Actual	0.85	0.73	0.67	0.69	0.70	0.75	0.79	0.84	0.99	1.32
Index numbers	75	65	59	60	61	66	69	76	88	111

N.B. Base: 1921-1923=100.

AVERAGE DAILY WAGES OF MINERS

(In yen)

	1936		1937		1938	
	Male	Female	Male	Female	Male	Female
Mineral mines	1.69	0.64	1.84	0.71	2.02	0.77
Coal mines	1.87	0.79	2.10	0.87	2.47	1.07
Oil-fields	1.65	0.86	1.67	0.88	1.73	0.93
Other mines	1.68	0.68	1.74	0.68	1.89	0.75
Average	1.81	0.74	2.01	0.82	2.33	0.96

INDEX NUMBERS OF WAGES

Compiled by the Ministry of Commerce and Industry

(Average for 13 larger cities)

(Base: Average of April 1934-March 1935=100)

Kind of Industry:	1935	1936	1937	1938	1939	1940
Fiber	100.3	98.9	103.2	107.7	124.5	141.7
Metallic	98.7	98.9	105.9	111.2	122.5	131.7
Machine	101.0	99.4	105.0	109.2	118.9	127.5
Kiln	100.4	100.7	107.6	114.6	132.5	152.6
Chemical	101.9	103.3	109.0	117.0	130.5	155.2
Foodstuff (manufactured)	100.6	102.3	107.5	104.5	126.4	140.2
Clothes	102.4	101.6	108.1	118.1	133.5	157.4
Wood-work	101.8	103.0	109.6	118.3	136.2	162.7
Printing and book-binding	103.8	105.6	108.2	110.9	116.9	127.3
Building	102.3	104.9	113.8	122.0	138.7	157.1
Stevedores	101.2	98.8	112.4	121.9	140.4	166.9
Day laborers	101.2	100.0	108.0	121.0	143.8	
Average	101.1	101.1	107.0	113.7	128.5	146.1

INDEX NUMBER OF WAGES VERSUS COMMODITY PRICES

(Base: Average of one year, April 1934-March 1935=100)

Index Number of	1935	1936	1937	1938	1939
(a) Wages	101.1	101.1	107.0	113.7	128.5
(b) Wholesale prices	100.5	104.3	127.6	145.0	156.9
(c) Retail prices	101.8	106.5	117.3	137.1	154.7
Actual value of wages					
1. (a) ÷ (b) × 100	100.6	96.9	83.9	78.4	81.9
2. (a) ÷ (c) × 100	99.3	94.9	91.2	82.9	83.1

WORKING HOUR

Working Hour According to the report of the Ministry of Commerce and Industry, the number of working hours of laborers in 1939 and last 5 years was as follows:

Kind of Industry	AVERAGE DAILY WORKING HOURS IN 1939	
	Monthly Working Days	Daily Working Hours
Fabric	24.7	9:48

	Monthly Working Days	Daily Working Hours
	Metallic Machine manufacturing	24.3
Ceramics	24.5	10:43
Chemical	24.9	9:51
Foodstuffs	25.6	10:24
Clothing	26.2	10:09
Wood work	25.7	10:21
Printing	25.7	9:48
Stevedore	26.3	10:43
	24.9	10:33

AVERAGE DAILY WORKING HOURS IN 1935-1939

Kind of Employment	1935	1936	1937	1938	1939
Silk-reeler (Female)	9:56	9:55	9:56	9:58	10:00
Cotton spinner (Female)	8:32	8:33	8:32	8:30	8:30
Rayon yarn (male)	8:39	8:59	9:01	9:07	10:21
Rayon textile (Female)	10:05	10:06	9:59	10:03	10:53
Dyeing (Printing) (Male)	11:08	10:43	10:47	10:53	10:53
Hosiery (Male)	9:56	9:57	10:12	10:12	10:04
Furnace (Male)	12:05	11:53	11:55	11:48	11:51
Casting (Male)	10:51	10:45	11:05	11:07	10:55
Lath-man	10:50	10:51	10:56	11:09	10:38
Pollsher	11:10	11:06	11:01	11:05	10:52
Finisher	10:50	10:51	10:56	11:02	10:44
Cement	10:22	10:04	10:32	11:04	11:25
Potter	9:40	9:40	9:37	9:32	9:39
Vitriol-maker	10:59	10:55	10:55	11:09	11:22
Match-maker (Female)	9:29	9:20	9:30	9:14	9:15
Japanese paper maker (Male)	10:50	10:54	10:54	10:48	10:46
Leather-maker	9:12	9:25	9:52	9:55	9:43
Flour-miller	10:45	10:40	10:41	10:59	11:22
Canner	9:57	10:00	10:14	10:16	9:57
Tailor (Foreign clothes)	10:03	10:12	10:22	10:28	10:20
Sawyer	9:40	9:46	9:49	9:50	9:47
Printing, Compositor	10:48	10:48	10:57	10:36	10:42
Stevedore (sea)	10:53	10:31	11:00	11:34	10:22
Yearly average (for 64 kinds)	10:07	10:05	10:10	10:13	10:13

It will thus be seen that labor is being strained in all its phases, especially in the heavy industries.

The working hours in the above statistics do not include time for rest. But time for rest has been shortened since 1929.

Labor Accidents Statistics for factory accidents, which have been published include only those figures up to 1937, but it is estimated that accidents have increased since. The number of the casualties which took place while laborers were at work, during 1935, according to the publication of the Social Bureau, numbered 75,926, exclusive of factories to which a portion of the Factory Law applies, and showed an increase of 13,809 over the previous

year. The number of accidents, as compared with the total number of laborers, began to increase suddenly after 1933.

The number of casualties in recent years is shown below.

TOTAL CASUALTIES IN FACTORIES

Year	No. killed	No. seriously injured	No. slightly injured	Total
1932	250	4,058	24,925	34,233
1933	404	10,802	37,157	48,363
1934	555	15,510	46,052	62,117
1935	568	18,970	56,388	75,926
1936	551	19,306	60,684	80,541
1937	681	23,137	77,680	101,498

ACCIDENTS IN MINES

Year	Cases	Deaths	Injured	Total Casualties
1934	73,239	880	72,807	73,687
1935	72,348	1,120	71,746	72,866
1936	72,510	1,234	71,812	73,046
1937	78,605	1,031	77,863	78,894
1938	83,991	1,365	83,435	84,800

Marine Accidents The number of fishing boats and vessels wrecked in 1939 decreased as shown in the following table.

MARINE ACCIDENTS

Year	Number of Fishing Vessels	Fishing Vessels Wrecked		Amount of Loss (In \$1,000)	Number of Fishermen	Crews on the Wrecked Vessels		
		Without Engines	With Engines			Perished	Survived	Total
1935	366,019	3,443	563	1,775	1,098,999	377	1,942	2,310
1936	366,267	2,841	960	1,744	1,102,502	517	2,292	2,809
1937	364,260	1,270	558	1,147	1,078,142	484	1,619	2,103
1938	356,482	1,558	659	2,649	1,035,878	476	1,918	2,394
1939	354,729	1,031	501	1,767	1,014,472	301	1,253	1,554

Labor Disputes

The number of labor disputes in 1931 recorded highest with 2,456 including 998 which were accompanied by strikes, sabotages or lockouts. The following 4 years showed a decreasing tendency in labor disputes, their number in 1935 being 1,872 including 590 cases accompanied by strikes, sabotages or lockouts. But in 1936 the number rose once again and in the first half of 1937, it surpassed the corresponding period of the record year 1931, and then suddenly began to decrease after July 1937, when the North China incident occurred.

The reason for the decrease in the number of labor disputes in 1932 and after may be found in the occurrence of the Manchurian incident in September 1931 and the consequent change of thought among the people in which nationalism gained an ascendancy over the socialistic ideologies of labor lead-

ers. The leaders themselves altered their concepts and showed a spirit of cooperation with capitalists in promoting the benefit of industrial enterprises. The prosperity attending the heavy industries and the export trade also had much to do with the decrease in labor disputes, and the nature of disputes was considerably modified.

The increase in 1936 and the first half of 1937 was caused not by any change in thought but by a purely economic reason, namely, the increase in wage did not correspond to the rise in prices. The sudden decrease in the second half of 1937 was exceptional, being the result of the emergency situation and the national mobilization of men and resources. The tendency prevailed in 1938 and the number of disputes decreased to a half of 1937. The following table is given here to show the general conditions of labor disputes during past 10 years, 1931-1940.

LABOR DISPUTES IN 1931-1940

Year	Total of Disputes		Partakers per Case	Disputes accompanied by Strikes, Sabotage or Lockouts		
	Cases	Partakers		Cases	Partakers	Partakers Per Case
1931	2,456	154,528	63	998	64,536	65
1932	2,217	123,313	56	893	54,783	61
1933	1,897	116,733	62	610	49,423	81

Year	Total of Disputes		Partakers Per Case	Disputes accompanied by Strikes' Sabotage or Lockouts		
	Cases	Partakers		Cases	Partakers	Partakers Per Case
1934	1,915	120,307	63	626	49,536	79
1935	1,872	103,962	56	590	37,734	64
1936	1,975	92,724	47	547	30,900	56
1937	2,126	213,622	101	628	123,730	197
1938	1,022	53,550	52	262	18,341	70
1939	1,096	90,723	82	688	50,162	72
1940	718	54,005	75	—	—	—

LABOR DISPUTES BY INDUSTRY

Industry:	1936	1937	1938	1939	1940
Metal, machinery and tool	408	394	203	209	145
Chemical	258	290	139	119	69
Textile	196	286	105	99	89
Foodstuff	55	85	39	40	30
Miscellaneous	313	277	132	117	63
Mining	102	120	78	88	113
Transportation	260	348	106	194	99
Engineering and construction	115	100	61	60	46
Others	268	226	99	110	64
Total	1,975	2,126	1,022	1,096	718
Participants	92,724	213,622	53,550	90,723	54,005

CASES CLASSIFIED ACCORDING TO THE NATURE OF DEMANDS

	1938 1939 1940			1938 1939 1940		
	1938	1939	1940	1938	1939	1940
Positive demands						
Increase of wages	429	559	374			
Shorter hours	—	—	—			
Recognition of freedom of trade unions	—	—	—			
Better equipment for laborers in factories	—	—	—	29	19	15
Rejection of overseers	—	45	39			
Total	452	604	413	207	95	69
Negative demands						
Against lowering of wages	29	25	6	82	59	14
Against revision of working method, etc.				347	226	130
Against revision of the method of paying wages				223	241	175
For establishment or improvement of pension						
Against dismissals						
Total						
Others						

Results of Disputes

Year	Total	Compromised	Demands Accepted	Demands Unaccepted	Defeated	Left Unsettled
1934	623	271 (43.5)	163 (26.2)	188 (30.2)	1 (0.1)	—
1935	584	276 (47.3)	157 (26.9)	151 (25.8)	—	—
1936	547	217 (39.7)	176 (32.2)	153 (27.9)	—	1 (0.2)
1937	628	261 (41.5)	168 (26.9)	197 (31.3)	2 (0.3)	—
1938	262	84 (32.0)	90 (34.3)	86 (32.8)	2 (0.8)	—

Figures in parentheses represent percentages.

Tenant Disputes

In the past 5 years tenant disputes centered round the protection of the tenant rights, or the demand of tenants for the continuation of their tenure. The difficulty for a farmer to get another farm has become much greater than that of finding work for a laborer in a city. To lose one's farm is to starve, and tenant disputes along this line are accordingly acute. The number of tenant disputes since 1937 decreased as shown in the following table.

TENANT DISPUTES

Year	Number	Tenant Participants	Area Included (In cho)
1935	6,824	113,164	70,160
1936	6,804	77,187	46,036
1937	6,170	63,246	39,255
1938	4,615	52,817	34,075
1939	3,578	25,904	16,622

The causes, demands and results of disputes in the past 5 years have been as follows:

TENANT DISPUTES

By Causes

	1935	1936	1937	1938	1939
Raising tenant rents	115	227	237	146	142
Bad crops	2,451	1,373	1,116	896	563
High tenant rents	66	155	139	96	135
Unbalanced production cost	6	15	10	5	47
Cancellation of tenant right	3,031	3,644	3,575	2,562	1,752
Arrears of farm-rents	734	871	621	553	554
Others	421	519	472	357	385

By Demands

	1935	1936	1937	1938	1939
Temporary lowering of tenant rents	2,616	1,621	1,546	1,212	711
Permanent lowering of tenant rents	96	213	228	148	218
Against raising tenant rents	114	197	184	132	127
Continuation of tenant rights	2,862	3,674	3,274	2,274	1,524
Recognition of tenant rights	45	69	47	25	21
Compensation for lost tenant rights	123	184	155	127	106
Others	968	846	964	845	871

Results of Disputes

	1935	1936	1937	1938	1939
Compromised	5,131	5,162	4,824	3,619	2,960
Demands accepted	381	294	277	264	136
Demands withdrawn	160	167	107	85	93
Naturally settled	82	72	76	51	52
Unsettled	1,070	1,109	886	596	337

Patriotic Industrial Association The outstanding event in the annals of the trade union history in Japan was the birth of the Patriotic Industrial Association (Sangyo Hōkoku Kai) in 1938. The organization of the Association was first initiated by the Arbitration Society for the purpose of readjusting the relations between capital and labor in the time of emergency. A special commission in the Society recommended, early in 1938, the organization of such

associations in factories and industrial establishment all over the country, and within a few months the number of the Patriotic Industrial Associations became so many that the Central Patriotic Industrial League was organized on July 30th. The Central League, then began a national campaign for the spread of the principles of the association among the employers and workers in all kinds of factories and for the organization of the association in every one of them

in all the districts of the country. On August 24, 1938, the Government decided to give a helping hand to the movement and issued an order, in the name of Vice-Minister of the Home and Welfare Ministry, to encourage the organization of a patriotic trade union in every factory if possible. Thus the movement became semi-governmental and the number of the Patriotic Industrial Associations rapidly increased. In view of the necessity of national control, the leadership and supervision of the Associations was finally transferred from the Central Patriotic Industrial League to the Government on April 24, 1939, and the National Federation of

the Patriotic Industrial Associations was organized, while the Central League was reorganized so as to take the part of education and propaganda only.

According to the report published by the Government on July 20, 1939, the number of the associations reached 5,332 with a membership of 1,849,000. There is no doubt that the appearance of such patriotic trade unions will bear hard upon the existing trade unions and federations which are confronted with the danger of dissolution or dissension among members as revealed by the decreasing tendency of trade unions.

TRADE UNIONS

(Compiled by the Ministry of Welfare)

	Unions	Members	Total Number of Laborers	Union Percentage
1931	818	368,975	4,729,436	7.9
1932	932	377,625	4,860,276	7.8
1933	942	384,613	5,126,719	7.5
1934	965	387,964	5,764,277	6.7
1935	993	408,662	5,906,589	6.7
1936	973	420,589	6,090,116	6.9
1937	837	395,290	6,422,333	6.1
1938	731	375,191	6,765,399	5.5
1939	517	365,804	—	—
1940	428	184,004	—	—

Farmers' Unions Farmers' unions are changing from temporary to permanent organizations, and are steadily increasing in number. According to

the Ministry of Agriculture and Forestry in 1921 there were only 681 tenant-farmers' unions, and their growth is shown below.

FARMERS' UNIONS

(Compiled by the Ministry of Agriculture and Forestry)

	Landowners		Tenant-farmers		Landowners and Tenant-farmers	
	Unions	Members	Unions	Members	Unions	Members
1933	686	49,645	4,810	302,736	2,309	279,431
1934	633	48,836	4,390	276,246	2,219	271,434
1935	531	38,172	4,011	242,422	1,748	202,785
1936	513	35,703	3,915	229,209	2,878	254,907
1937	497	35,054	3,879	226,919	2,849	251,056
1938	473	31,902	3,643	217,883	3,158	263,071
1939	474	32,595	3,509	210,208	3,152	251,313

LABOR MEASURES IN 1940-1941

Supply of Labor The number of laborers in factories continued to increase in 1940 as shown in the foregoing tables, especially in factories connected with the wartime industries. In the mining industry the increase of miners was remarkable, the greatest in-

crease being witnessed in the case of coal mining. The number of female workers in the mining industry showed a rising tendency while it was in a declining tendency in manufacturing factories.

In general, the supply of labor in 1940 was far short of demand, not only for the heavy industries and the mining industry but for agriculture and fisheries. On the other hand, a considerable number of common traders and industrialists (108,084 in September 1940) was thrown jobless on account of the unbalanced emphasis on the heavy industries and State control of labor for the purpose.

In such circumstances it was inevitable to give rise to a scramble for workmen among factories, and the Government issued an act for controlling employment, under the National General Mobilization Law, in March 1939, another one, in February 1940, for restricting the employment of young workers (see P. 617-620, The Japan Year Book, 1940-41). But the movement of workers, both skilled and unskilled, from one factory to another accelerated in spite of these regulations, causing undesirable labor conditions for the execution of the productive power expansion plan. In November 1940, therefore, the Government revised the Employment Control Law of March 1939 in order to prohibit a free movement of workers among factories.

Service Book for Workers In order to make the control of labor more effective the National Service Book Law was promulgated on July 1, 1941, to be enforced as from October 1 of the same year. According to Article 1 of the Law all technicians and laborers, from 14 to 60 of age, in mining, manufacturing, engineering, transportation and communications industries are to hold service books issued by the Government. Service books shall be given them in the 3 months of July, August and September, and the movement of workers shall be regulated in accordance with the existing control laws and the service books as from October 1.

Control of Wages The Ordinance Pertaining to the Control of Wages and the Ordinance Pertaining to Temporary Measures Concerning Wages were instituted in March and June, 1939, respectively, in accordance with the provisions of the National General Mobilization Law, for the purpose of checking a further increase in workers' wages and of adjusting them rationally and properly under the current emergency. The Ordinances were to remain in force for one year, that is to say, until October 19, 1940.

The rapid increase in wage levels has been successfully combatted so far by the above-mentioned measures. The objective of wage control, however, lies not only in holding back the advance of wage levels but also in augmenting labor efficiency by the stabilization of workers' livelihood, as well as in coordinating the relation between the demand and supply of labor. With that purpose in view, the revised Ordinance was enforced on October 20, 1940.

The Ordinance pertaining to Control of Wages of March 1939, was applicable only to workers in the factories and mines, as provided in the Factory Law, while the Ordinance pertaining to Temporary Measures Concerning Wages was extensively applied to workers engaged in various enterprises connected with the production and distribution of commodities, including those employed in agriculture, forestry, fisheries, civil-engineering, communications and transport, and commercial undertakings.

The new Ordinance provides, as in the Temporary Measure Concerning Wages, for the control of the wages of all the workers engaged in undertakings of every description.

The revised Ordinance requires employers having a permanent force of 10 or more workers to formulate wage scales and to make entries in proper forms of various items relating to the payment of wages. The wage scales thus formulated should be communicated to the workers in their employ either by notice boards or some other proper means, and be reported to prefectural governors within 14 days after formulation.

The revised Ordinance authorized the Minister of Welfare to issue necessary orders for the control of wages or take necessary measures in connection with the computation of same.

As regards methods of wage payment, certain restrictions may be imposed, when deemed necessary (for instance, partial payment of wages in bonds, or compulsory savings, etc.).

The ordinance for controlling wages of 1939 prescribed the minimum initial wage for inexperienced workers under 20 years of age. Hereafter, in virtue of the provisions of the revised Ordinance workers other than above prescribed will be entitled to the minimum wage officially fixed.

The maximum initial wage for inexperienced workers in factories and mines was provided for in the old

ordinance. The revised Ordinance provides for workers other than those mentioned in the foregoing Ordinance, for whom the Minister of Welfare or prefectural governors are authorized to fix the maximum initial wage, the initial wage for experienced workers here meaning the initial wage they will receive at other factories to which they may have moved. The period in which the maximum initial wage is applicable is, for inexperienced workers, three months after being first employed, and for workers other than inexperienced workers one year after being first employed. Such provisions are laid down, with a view to preventing unfair competition in securing experienced workers on the part of employers and frequent changes of employment on the part of workers.

The Minister of Welfare or prefectural governors are empowered to fix an official maximum wage for day laborers and others belonging to a similar category. However, no official wages were fixed for workers in factories and mines, as it has often been found difficult to carry them out. Only when the wages of workers are inordinately high, the competent authorities may order employers to reduce them.

A new method of wage control has been adopted, in the form of restrictions on total amounts to be put into effect after the lapse of the Ordinance Pertaining to Temporary Measures Concerning Wages. This restrictive measure applicable to total wage amounts does not intend to limit the total wages of a factory or workshop to any definite fixed amount. It provides for a procedure required to obtain approval by the prefectural governor, in case the actual total amount of wages to be paid in any factory or workshop is in excess of the sum total of average wages by the hour, officially fixed by the Minister of Welfare or prefectural governors, multiplied by the total number of hours of labor in the said factory or workshop.

Approval by prefectural governors of restrictions on total wage amounts must be obtained in the following cases:

1. Where the wage level of workers in a factory or workshop is higher than that in other factories or workshops, by reason of age, kind of work, or years of experience.
2. Where no workers are available at the ordinary wage level due to the

peculiar nature of the work or conditions in the factory or workshop.

3. Where superior efficiency is evinced in comparison with other factories or workshops of a similar kind.

4. Where there were natural calamities or some particular requirements.

Such restrictions will be applied to every employer with a permanent force of 30 workers or more in his employ. But no wages of workers mentioned below are subject to the restrictions:

1. Wages of workmen who are paid wages by their employers within the scope of the permission which the prefectural governor has granted with respect to the amount of wages per production unit.

2. Wages of workers employed with wages by the commission wage system, approved by the prefectural governors in respect of the unit of commission, of commission percentage or of method of computing wages.

3. Wages of workers who are employed or given increased wages, on the basis of the wage scale in respect of initial wages or of the increase of wages which has been approved by the prefectural governors.

4. Wages of workers in the exclusive employ of offices outside of factories or workshops.

5. Wages of workers hired by the day.

The Minister of Welfare is authorized to place restrictions necessary for the control of wages, in respect of allowances and of payments in kind. On the other hand, employers must obtain approval of prefectural governors, when they intend to pay to workers who are not at work, allowances amounting to more than wages receivable while at work. Also, in case payment in kind not mentioned in the wage scale is to be given to workers, approval thereof must be obtained from the prefectural governor.

Employers with a permanent force of 10 workers or more must obtain permission from the prefectural governor, in case they intend to give their employers bonuses amounting to more than the following:

1. An average bonus per person amounting to 60 yen covering one year.
2. An average bonus per person covering one year corresponding to 40 days of the average standard pay in a factory or workshop.

Employers with a permanent force of

10 workers or more also must obtain the permission of prefectural governors should they intend to pay their employees 20 yen or more per person covering one year.

The Minister of Welfare is authorized to issue to employers necessary orders concerning sales in kind or on commission, in case these methods may affect the real value of wages to be paid to workers.

The Ordinance Pertaining to Temporary Measures recognizes the system of wage agreement, primarily with a view to controlling wages for day laborers and farm hands. And this provision has been incorporated into the new Ordinance, thereby strengthening and perfecting it.

The present Ordinance has provided not only for the agreement concerning wages between employers themselves or between associations or any other bodies, but also for the compulsory participation in and adherence to it by persons outside the agreement. It provides also for promoting the conclusion of agreements within designated periods as well as for the substitution for such agreements by the decision of prefectural governors.

The Minister of Welfare or prefectural governors are authorized to collect reports from employers, or to order them to prepare books, or to send the officials concerned to make personal examinations.

Accordingly, the employer with a permanent force of 10 workmen or more in his employ is required to prepare a book containing the pay roll of his employees, the uniform style of said books being prescribed in the present Ordinance. Again an employer with a permanent force of 30 workers or more is required to submit to the prefectural governor copies of said books each month. Legally, the Ordinance Pertaining to Temporary Measures concerning Wages was to lapse on October 19, 1940. However, certain parts of the Ordinance (the provisions relative to the prohibition of the wholesale raising of wages) will remain in force, until the restrictions on total amounts of wages as provided in the revised Ordinance shall take effect. Even when the above restrictions are in operation, wages of workers to which the said restrictions are not applicable will be governed by part of the old ordinance.

The regulations governing the opera-

tion of the revised Ordinance prescribes that, when matters requiring approval or permission subsequent to the operation of the Ordinance are of a minor nature or of a nature calling for prompt disposition, and when the prefectural governor does not issue to the employed any order or enquiry in writing in connection therewith, within 30 days after the arrival at the administrative authorities of an application for said approval or permission, such approval or permission is deemed as having been granted.

The new Ordinance is not applicable to workers employed in work undertaken by prefectures; but it will be applied to workers employed in work undertaken by cities, towns or villages.

The revised Ordinance will be in force as from July 1, 1941, in Chosen, Taiwan, Karafuto and the South Sea Islands.

Employment Exchange Among the most outstanding measures is the reorganization of the 378 State-operated employment bureaus throughout the country on February 1, 1941. These were renamed the Kokumin Shoyugyo Sidoshō (Bureaus for the People's Vocational Guidance) on that date, which had been known for a long time as the Shokugyo Shokaijo (Employment Bureaus).

Accordingly the employment bureaus, in addition to the old functions connected with employment exchange, national registration, prevention of unnecessary shiftings of labor, restrictions in the employment of young men and boys, now assume to encourage, advise and guide those desiring to change occupations.

The staffs of the employment bureaus in many cities, therefore, have recently been reinforced by full-time officials newly chosen from among the public to take charge of such guidance. Besides these, it has been arranged that vocational directors be commissioned for the city areas and also for such towns and villages as may require them, for the purpose of giving advices and guidance individually to employers and employees who desire to change occupations. Like the members of the district social welfare commission these directors are to be chosen from among those who are well versed and keenly interested in industrial and economic trends and the actual conditions in industrial circles.

in giving advices to those desiring to make a fresh start in life, the vocational directors are required constantly to keep in touch with the employment bureaus in their respective districts.

Workmen's Annuity Insurance A distinct progress has been made in Japan's legislation for the protection of the working class when the workers' annuity insurance system was adopted in 1941 as an important measure of the wartime labor policy.

The health insurance system for the benefit of the workers in factories and mines, has been in operation wherein they are aided in the restoration and protection of their health in case of illness or accidents. So far health insurance has contributed toward the promotion of the labor's capacity to produce. However, nothing in the way of safeguarding the livelihood of workers after they have retired on account of old age has existed in this country. Nor have there been similar arrangements for workers in Government enterprises. The reserve fund of the annuity insurance is estimated to total 130 million yen a year, which would amount to 1,500 million yen in the first 10 years.

Workers engaged in factories, mines, and communications services are to be insured compulsively so that, when they retire in old age, become disabled from accidents or die, the State may render assistance to ease their livelihood or that of their families by granting them annuities or lump-sum allowances.

There are three classes of the insured: (a) those compulsively insured, (b) those voluntarily insured, and (c) those voluntarily continuing as insured.

(a) **Those Compulsively Insured:** Workers who are compelled to take out insurance under the Workmen's Annuity Insurance Law are those employed in factories, mines, and in communications services which have regular employees of 10 and upward, and which come within the purview of the Health Insurance Law. Only female and temporary employees as well as those employed under some special circumstances are excluded from the compulsory application of this system.

(b) **Those Voluntarily Insured:** The factories, mines and other industrial establishments, to which the workers' annuity insurance system is applicable, must be those coming within the purview of the Health Insurance Law. Of

factories and mines subject to the said Law, there are some which must be excluded from the compulsory application of the new system because they employ less than 10 workers, although it is conceivable that a good many of the workers, both men and women, employed in these places may desire to take out annuity insurance. These people are in the same circumstances as workers compulsorily insured under the system, and the new system provides that they may, with the consent of the employers, apply for and voluntarily take out annuity insurance.

(c) **Those Voluntarily Continuing as Insured:** As a rule the annuity is granted only to persons who have been insured for over 20 years and have reached the age of 55. There may be cases where persons may have been insured for a comparatively long period, nevertheless not entitled to the annuity because the said period is less than 20 years; although, of course, they will not lose anything by being so insured. Only lump-sum allowances granted to such persons are considerably smaller than annuities. It happens, then, that these persons may well wish to complete the stated period even by paying the required premiums themselves and thereby become entitled to the annuity. It is to satisfy this legitimate desire of many persons that the voluntary continuation clause has been provided for in workmen's annuity insurance. Under this provision any worker, who has become ineligible to his insurance after paying premiums for 14 years or more, may be allowed to renew his insurance by applying for it within a stated period after such disqualification.

The benefits of the new insurance are granted in the form of old-age annuity, disability annuity or allowance, and annuity to the family of the deceased. Where workers are no longer insured they are given the surrender allowance.

(a) **Old-age Annuity:** This annuity will be paid to the workers employed in factories, or in communications services who have been insured under the present system for not less than 20 years, upon reaching 55 years of age and during their lifetime after retirement. The amount to be paid to a person who has been insured corresponds to 25 per cent, or one-fourth, of the average yearly wages such a person has been receiving. In the case of a person's service exceeding 20 years, his

annuity will be increased by one per cent for each additional year over the 20-year period. For example, a worker who has been insured for 30 years with the average wages of 800 yen a year, he is entitled to an annuity corresponding to 35 per cent of 800 yen, or 280 yen. As has been stated, all this concerns workers in factories and communications services. But in the case of miners, in view of the special conditions under which they labor, the period of insurance in which the annuity becomes ordinarily available is shortened and fixed at 15 years instead of 20 years. In the case of miners who have been insured for 12 years during their 15 years of service, they, too, shall be entitled to the same amount of annuity as in the case of ordinary factory workers.

(b) Annuity and Allowance for the Disabled: Because of the tribulation of workers who have been disabled for life and lost their ability to labor, which is their only worldly asset, the insurance provides an annuity of the same amount as in the case of old-age annuity when they become disabled for life, regardless of the cause, after they have worked for not less than 3 years. Where, however, they are still able to take up any other work, they will be given a lump-sum allowance corresponding in amount to 7 months of the average wages.

(c) Family Annuity: The new insurance sees to it that the families of the workers are not turned adrift into the streets upon the death of the workers who are entitled to the annuity under this system. The annuity to the family corresponds to one-half of the amount of the old-age annuity and is granted for a period of 10 years.

(d) Allowances to the Workers Who have Discontinued their Insurance: In the case where workers who are insured discontinue insurance before maturity, it is natural that something should be done for them if only to compensate them for what they have paid in by way of premiums. Accordingly, where persons have been insured for not less than 3 years, allowances may be given to them according to the period of insurance up to the maximum amount corresponding to the average pay for

300 days, if they make application for refund within one year after discontinuance of their insurance.

For financing all this insurance system, premiums are collected in equal parts from the employers and employees, except in the case of the continuation insurance for which the insured alone are responsible for the whole amount of the premium.

The rate of premium is, in the case of ordinary factory labor, 6.4 sen per yen per diem, and, with workers in the mines, the rate is increased to 8 sen. For example, for a worker in a factory receiving 60 yen a month the premium would be 12.8 sen a day, half the amount being paid by the worker himself. This will amount to 1.90 yen per month for the factory worker; and by paying in this amount for a period of 20 years, the insured person may, upon retirement and upon reaching 55 years of age, receive, supposing the wages remain the same, at least 180 yen a year for the rest of his life. Besides, there are the disability and family annuities and allowances. Obviously all this business cannot be financed by the premium contribution by the employers and employees. In fact, no small portion of the expenditures is borne by the National Treasury, the entire expenses required for running the business being paid by the Government, in addition to the payment of 10 per cent of the insurance money for factory workers and 20 per cent for miners.

Organization of the Central Association of Workers In conformity with the movement for the new national structure, the National Federation of the Patriotic Industrial Associations was dissolved and the new Dai Nippon Sangyo Hokoku Kai (the Great Japan Patriotic Industrial Association) was created on November 23, 1940. The new association includes as members all the existing patriotic industrial, commercial, mining and mariners' associations, the number of which reaches over 46,000 with an aggregate membership of 4,700,000. Its headquarters in Tokyo has 4 Bureaus divided into 12 sections to take all works of guidance, education and control of workers in order to make them most faithful contributors toward the enhancement of the national economy in the emergency.

CHAPTER XXVII

JUSTICE AND POLICE

*For Those Who Want to Know
Realities of East Asia*

CONTEMPORARY JAPAN

A Review of Far Eastern Affairs

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CHAPTER XXVII

JUSTICE AND POLICE

JUDICATURE

The Judicature's Position

Since the promulgation of the Japanese Constitution in 1889, the right of the sovereignty of the Emperor has been divided into the three distinct departments, of legislation, judicature and administration.

In accordance with Article 57 of the Constitution, "the Judicature shall be exercised by the Courts of Law according to law, in the name of the Emperor." Judges are appointed from among those possessing such qualifications as are determined by law and they are guaranteed by the Constitution against being deprived of their positions unless by way of criminal sentence or disciplinary punishment. Not only are the judges guaranteed their positions, but they have authority in exercising judicial power to judge on their own independent views, using the statutes as the sole standard of judgment without being in any way swayed by interference from others and unaffected by authority arising from any quarter.

Since the judges are entirely independent of the administration the results of judicial decisions are equally independent thereof, and the decisions are not affected by the administrative power except in cases of pardon or provisional release.

Composition of the Courts

In Japan, the ordinary Courts of Law for the adjudication of civil and criminal cases consist of (1) Local Courts (Ku; Saibansho), (2) District Courts (Chiho; Saibansho), (3) Courts of Appeal (Koso-in), and (4) the Supreme Court (Tai-shin-in). The District Courts, the Courts of Appeal and the Supreme Court are all collegiate courts with special divisions, in each of which sit a number of judges.

Local Courts The Local Courts are presided over by single judges. A three instance system is adopted in the adjudication of all ordinary cases; and any one may lodge an appeal against a

judgment rendered in the first instance and demand revision of that rendered in the second instance.

In the matter of civil cases, the Local Courts possess judicial power to adjudicate on the following matters in the first instance:

1. Demands for money less than 1,000 yen or for articles, the value of which is less than 1,000 yen.

2. The following cases irrespective of value:

(a) Legal actions brought by lessors against lessees, or vice versa, for the receipt, vacation, use, occupation or repair of houses or other buildings or parts thereof, or for the seizure of the furniture and fixtures or belongings of lessees by lessors.

(b) Legal actions only concerning the boundaries of real estates.

(c) Legal actions only concerning occupations.

(d) Legal actions brought by employers against employees, or vice versa, for contracts of employment, the terms of which do not exceed one year.

(e) Legal actions brought by travellers against hotel or inn keepers, or vice versa, for matters concerning board or lodging, or by travellers against water or land forwarding agents, or vice versa.

(f) Matters concerning bankruptcy.

In criminal cases, the Local Courts, as the courts of law for adjudication in the first instance, possess judicial power concerning the following matters, provided they have not been subjected to preliminary examination:

1. Offences punishable with detention or fine.

2. Offences punishable with penal servitude, imprisonment for fixed terms or by imposition of fines, except those punishable with penal servitude or imprisonment for more than one year.

District Courts District Courts are courts of the first instance. In civil cases, the District Courts possess judicial power concerning the following matters:

1. In the first instance:

Demands other than those falling under the jurisdiction of the Local Courts or of the Courts of Appeal.

2. In the second instance:

(a) Appeals lodged against judgments rendered by the Local Courts;

(b) Demands determined by law for revision of decisions or orders rendered by the Local Courts.

Further, with reference to criminal cases, the District Courts possess judicial power concerning the following matters:

1. In the first instance:

Criminal cases falling neither under the jurisdiction of the Local Courts nor under the special jurisdiction of the Supreme Court.

2. In the second instance:

(a) Appeals lodged against judgments rendered by the Local Courts;

(b) Complaints determined by law against decisions or orders rendered by the Local Courts, except those falling under the jurisdiction of the Supreme Court.

Courts of Appeal The Courts of Appeal are courts of the second instance and possess judicial power concerning the following matters:

1. Appeals lodged against judgments rendered in the first instance by the District Courts.

2. Complaints determined by law against decisions or orders rendered in the first instance by the District Courts, except those falling under the jurisdiction of the Supreme Court.

Powers to adjudicate in the first and second instances in civil cases brought against the members of the Imperial Family belong to the Tokyo Court of Appeal.

The Supreme Court The Supreme Court (Tai-shin-in) is the highest court of law and possesses judicial power concerning the following matters:

1. In the final instance:

(a) Appeals against judgments rendered by the lower courts;

(b) Complaints determined by law against decisions or orders rendered in the second instance by the District Courts or by the Courts of Appeal;

(c) Complaints against decisions to reject appeals made by the Local or District Courts.

2. In the first, and at the same time, final instance: Preliminary examination and adjudication of offences against the Imperial House, offences of internal disturbance, and offences committed by

members of the Imperial Family, for which punishment heavier than imprisonment should be imposed.

Public Prosecutors

A public prosecutor's office, with the necessary number of prosecutors, is attached to each court, except the District Court for civil cases. The work of the public prosecutor is, in accordance with the code of criminal procedure, to take legal actions, to go on with necessary legal proceedings, to demand the right application of the law, and to observe the right execution of a judgment. According to the code of civil procedure, he also has rights to ask for a report whenever he thinks it necessary and presents his opinions to the court on it, and as a representative of public welfare he carries out his supervising business as laid down by the law in all judicial and administrative matters related to the court. But the public prosecutor acts absolutely independently of the court.

Court Officials and Prosecutors

Qualifications Candidates for the office of judge or prosecutor are chosen by the Minister of Justice from among those who have passed the higher judicial service examination. The selected candidates then have to serve a term of over one and a half years of probation in the courts or in a public prosecutor's office and pass a further examination, after which, should the report on their estimated ability be favorable, they will receive an appointment as judge or prosecutor. But those who have been professors of law in the Imperial Universities or lawyers of over three years standing can be appointed as judges or public prosecutors without examination and estimation.

The following are not to be appointed as either judges or public prosecutors.

(1) Those who have been convicted of a grave crime, with the exception of those political offenders who have been rehabilitated.

(2) Those who have served sentences on minor offences.

(3) Those who have been adjudicated bankrupt and could not be exempted from the responsibility.

Position of Judges and Public Prosecutors Judges are permanent officials appointed by His Majesty directly, or by His Majesty's order indirectly, or by His Majesty's approval, according to the grade of their position. Unless by way

of criminal sentence or disciplinary punishment judges are not to be moved to another post or place, be suspended from office, be deprived of position, or receive a reduction of salary, without their consent, except in so far as the Minister of Justice may order retirement from service by the decision of a general meeting of the Court of Appeal or the Supreme Court on account of disability caused through weakness of body or mind.

The public prosecutors are appointed by His Majesty directly or by His Majesty's order indirectly or by His Majesty's approval. Unless by way of criminal sentence or disciplinary punishment the public prosecutors are not to be deprived of their positions against their own will.

The Prosecutor-General at the age of 65 years and all other public prosecutors at 63 years of age must retire from service. A public prosecutor must obey the orders of higher authorities and judicial policemen must obey the orders issued by the public prosecutors or through them within the district of jurisdiction of the public prosecutor's office.

Jury System

In 1923 the Jury Law was issued and came into force on October 1, 1928, and Japan finally adopted the jury system under which persons other than judges are allowed to take part in criminal trials. The jury system is used in such criminal cases as where the punishment may be capital, or penal servitude or imprisonment for life. Other criminal cases in which the sentence may be penal servitude or imprisonment for a term longer than 3 years are tried by jury only upon demand of the accused and when they come within the jurisdiction of the District Courts. The following cases are not submitted to trial by jury:

(1) Offences which come under the special authority of the Supreme Court.

(2) Offences against the Imperial House, causing an internal disturbance, helping an enemy, disturbing international relations, and sedition.

(3) Violations of the Peace Maintenance Law.

(4) Violations of the Military Secrets Preservation Law, the Army or Navy Criminal Laws or any other offences in connection with military secrets.

(5) Violations of the Public Election Laws.

The accused can refuse to have his case tried by jury or withdraw his own demand to be tried by jury at any time previous to the statement of the case by the public prosecutor, under which circumstances the case cannot be referred to a jury.

The jury is composed of 12 men. At the trial, the chief judge, after having heard all the evidence for and against the accused, sums up the facts and main points of the case, and charges the jury to deliberate and render its verdict by a majority vote. The verdict must be a simple statement as to guilt or otherwise. If the court considers the verdict improper the case may be referred to another jury.

In a case where sentence has been passed on a jury's verdict of guilt, no appeal can be made to the Court of Appeal, but a demand for revision may be presented to the Supreme Court.

Penal System

History It was in the time of the Empress Suiko, 620 A.D., that the first written Penal Code was issued in Japan. The code was very simple, but later the Chinese penal code, the "T'o," was introduced and the Japanese code was drafted in a more systematic manner and promulgated by the Emperor Mommu, in 702, as the "Taiho Ritsu-Ryo." Five kinds of punishment were mentioned, namely, flogging, whipping, penal servitude, exile, and death, but in most cases these could be varied to confiscation of property or payment of a fine. Grave crimes were treason, atrocities, blasphemy, undutifulness to one's parents, adultery, etc. Confession of the accused was required as a necessary procedure of a criminal suit, and naturally torture was recognized as an indispensable means of obtaining such a confession. Several hundred years after the issuance of the Taiho Ritsu-Ryo the Shogunate Governments adopted extremely terroristic penal systems with the purpose of preventing the occurrence of criminal cases. One of the most important of them was the One Hundred Criminal Regulations of the Tokugawa Shogunate. It was a secret criminal code which was not published and was accessible to the judges only, an expression of the despotism of the ruling class that had as its motto, "leave the people ignorant of the niceties of law."

With the downfall of the Tokugawa Shogunate the Great Emperor Meiji abolished the system of intimidation and reformed the old penal code. The codification of Civil Law was carried on under the advice of Monsieur Gustave Boissonade, a French scholar of jurisprudence who was invited to Japan for that purpose. A new Penal Code and Criminal Procedure Law, the characteristics of which were that, "though the lawful punishment of criminals is assured, the penalties are tempered with sympathy toward the accused and are in no ways severe," were enacted and promulgated. "No crime shall be punished unless there is a regulation in the law." (*nullo crimine et nulla poena sine lege*) is one of the guiding principles of the code, which was formulated on the French penal code of 1810. Within a few years it was found that the new code was out of date and various amendments were discussed from 1884 to 1907, in which year a thorough revision was made and the present Penal Code issued. Since then the social conditions of the people have undergone rapid changes, more advanced theories regarding penalties have been gaining ground and so many defects have been noticed in the present code, that in 1926 the Extraordinary Legislative Committee passed a resolution that the Penal Code should be revised. A special investigation committee set to work and in 1931 an outline and draft of a revised penal code and prison law was drawn up. It is expected that the thorough study of the draft that is now going on will soon be completed.

Penalties Penalties are divided into six kinds, namely, the death penalty, penal servitude, imprisonment, monetary penalties, custody, and fines. Confiscation is recognized as an additional punishment. The death penalty is by hanging and is carried out in prison. Penal servitude and imprisonment are for limited terms and for life; limited terms extend from one month to 15 years. Under penal servitude labor is compulsory, but a prisoner serving a term of imprisonment is not compelled to work, though he may be allowed to do so at his own request. A monetary penalty is 20 yen and above, unless made lighter on decision. Custody is from one to under 30 days, and a fine is from 10 sen to less than 20 yen. Those who cannot pay monetary penalties and fines are kept in workhouses as an alternative.

Suspension of Sentence and Provisional Release

The present penal law allows probation. The execution of a penalty often leads to self-abandonment and turns comparatively harmless people, who are not yet addicted to criminal deeds, into habitual jail-birds. This is found to be especially so when the penalty is one of penal servitude for a short time, and it is, therefore, far better for people convicted of light and incidental offences to be excused from the real infliction of the penalty under special conditions and to be given proper admonitions in order to make them repentant by self-examination. Consequently, the Japanese courts are empowered, under certain conditions, to postpone the execution of sentence for from one to five years, beginning with the day of the sentence and according to the nature and condition of the case, on persons sentenced to penal servitude or imprisonment for less than 2 years.

Probation is cancelled (1) when the probationer, during the time of probation, commits another offence and is sentenced to imprisonment or is given a heavier sentence, (2) when the probationer is sentenced to imprisonment or a heavier penalty is imposed because of some other crime committed before the granting of probation, and (3) when, in cases not mentioned above, the probationer is found to have had at some previous time a sentence of imprisonment or some other heavier penalty inflicted on him. Should the term of probation expire without being revoked the sentence is automatically cancelled thereby. The draft of the penal code of 1931, besides confirming the system of probation, admits the principle of postponement of passing sentence in specially pitiable cases of a non-serious nature.

Release on parole was practised as early as 1790 in the House of Correction at Ishikawajima, Yedo; the present law admits it and it is widely practised. As reformation is one of the chief aims of punishment, when convicts are evidently repentant and there is no fear of their committing further crimes, it is unnecessary to continue the punishment. Therefore, it is stated in the present Penal Code, "when the convicts who are under penal servitude or imprisonment are found to be evidently repentant, provisional release may be authorized by the administrative office after they have finished one-third of the limited term or

ten years of the term for life" (Article 28).

Provisional release may be cancelled (1) when the persons on parole have committed another offence during the term of the release and have been sentenced to a monetary or heavier penalty, or (2) when they are sentenced to a monetary or heavier penalty because of some other offence committed before the provisional release, or (3) when they were sentenced to a monetary or heavier penalty because of another offence committed before the provisional release and that penalty must now be fulfilled, or (4) when they break the provisional release rules. In this case the rest of the term of sentence must be served.

Criminal Compensation System

A nation has the responsibility of compensating innocent persons who have been wrongfully punished or have been kept in detention during trial. The Criminal Compensation Law was enacted in 1931. Cases to be compensated according to the Law are as follows:

(1) When a verdict of "not guilty" or an acquittal has been given by the examining judge to a person who has been kept in detention, the State makes compensation for the loss caused by the detention.

(2) In case a verdict of "guilty" is reversed by a higher court and the accused has already suffered the execution of the penalty or was kept in detention before the execution, the State makes compensation for the loss caused by the penalty or detention.

When the accused is dead, the bereaved get the compensation. The bereaved in the terms of the Law are meant to be the spouse, children, grandchildren, parents, grandparents and those whose names were in the same census registration at the time of the death of the accused.

As compensation for unlawful arrest or detention, a sum of less than 5 yen is paid against the warrant of arrest or for each day of detention after the arrest or for each day of detention after the execution of the warrant of detention.

As compensation for penal servitude, imprisonment, or detention, a sum of less than 5 yen is paid for each day of the whole period. The same rule applies to detention before the execution of the death penalty.

As compensation to the bereaved of

a person who has mistakenly suffered the death penalty, a sum of money considered reasonable by the Court is given in addition to the compensation for detention.

As compensation for a monetary penalty or fine wrongly imposed, the amount of money corresponding to that of the monetary penalty or fine already paid is given back. In case a person was unable to pay the amount imposed and in lieu was kept in a Labor House, a sum of 5 yen for each day of detention is paid as compensation.

Claims for compensation should be made to the Court returning the verdict of "not guilty", or to the Court in which the examining judge pronounced the acquittal.

Criminal Thought Offence

The Imperial Ordinance No. 403 of November 14, 1936, prescribed for the organization of the Protection and Surveillance Station, and other Imperial Ordinances and orders of the Minister of Justice were subsequently issued in connection with the measures to be taken by the State for preventing criminal thought offences.

Protection and Surveillance System

The new rule which involves the creation of protection and surveillance stations and the establishment of a protection and surveillance commission is aimed at protecting persons who have once committed "thought" offences and preventing them from repeating the crime. It not only calls for placing old offenders under surveillance but aims at giving them positive guidance in order that they will not commit similar offences and will walk in the path of rectitude. This positive nature of the new system is expected to help in bringing about the defeat of Communism and elevating the Japanese spirit through encouraging those on the way of changing their minds to forge ahead, and assisting those who have already done so to earn a living. It constitutes an important link in the national "thought" defense line on the strength of its mission towards the preservation of peace and public order by preventing "thought" offences on the one hand and on the other by serving to elevate and clarify the essential spirit of the nation.

Objectives of the New System The objectives of the protection and surveillance system are limited to persons who have committed offences in the

light of the Peace Preservation Law. Offenders of other kinds do not come within its scope. Only those who have been granted a reprieve in indictment by the public prosecutor, or a stay of execution of their sentence by the law court, or who have been released on bail, or who have served their term, are placed under protection and surveillance. The invocation of this rule, however, must be made with the approval of the Protection and Surveillance Commission which is under the control of the Minister of Justice, and in such cases where the commission adopts a resolution against the invocation, the rule cannot be invoked.

Organs and Procedure The new system is enforced through the operation of 22 protection and surveillance stations throughout the country and a protection and surveillance commission. These stations are independent offices and are located in Tokyo, Yokohama, Mitō, Mayebashi, Shizuoka, Nagano, Niigata, Osaka, Kyoto, Kobe, Takamatsu, Nagoya, Kanazawa, Hiroshima, Okayama, Fukuoka, Kumamoto, Sendai, Akita, Aomori, Sapporo and Hakodate and their staffs are composed of guiding officials, protecting officials and secretaries.

The guiding officials take charge of directing and supervising the protection and surveillance business and as such may be regarded as the central machinery of the protection and surveillance stations. The protecting officials conduct the enquiry and surveillance business under instructions from the station masters, who are selected from among the guiding officials. There are at present 33 whole-time protecting officials over all the country and the Minister of Justice may commission other suitable persons as part-time officials.

The protection and surveillance stations are to be notified by the authorities concerned when some "thought" offenders have been granted a reprieve in indictment, a stay of execution of their sentence, have been released on bail, or have left prison after serving their term. Upon receipt of such a notification, the station concerned must immediately institute an investigation into the career, environment, mental and physical condition, and changes in thought and other relative affairs of the person in question. In the investigation, special attention should be given to ascertaining whether the person in question has changed his mind or not

and if so, the motive and extent of the financial and family conditions of his guardian and whether there is any prospect of the person in question earning a living in the future.

If the results of the investigation lead to a decision to place the person under protection and surveillance, the station concerned is to refer the matter to the protection and surveillance commission which must then pass a judgment. The station cannot place any person under protection and surveillance until it has received a notification from the commission that its decision has been approved.

Methods of Effecting the Protection and Surveillance There are three different methods for effecting the protection and surveillance. One is that the protecting officials concerned keep a personal surveillance over the person in question, another is to hand the person over to his guardian. In the third method, the person is put in the charge of some protective organization, temple, shrine, church, hospital, etc. In all the three cases, the station authorities concerned must explain to the person in question the significance of the decision to place him under protection and surveillance and caution him about his future conduct.

According to circumstances, two or even three methods may be employed simultaneously. The authorities concerned may also put restrictions on the abode, intercourse and correspondence of the protected if such a measure is deemed necessary or advisable.

The period of protection and surveillance is fixed at two years but it may be shortened or prolonged. Prolongation of the period, however, requires the approval of the protection and surveillance commission.

As already stated, the protection and surveillance system has, as its primary aim, the encouragement of "thought" offenders to change their minds and the assistance of those who have changed their minds in securing a living. It therefore is natural that adequate measures should be taken to guide such persons properly in thought and help them to enjoy life.

In view of the specific nature of "thought" offenders, the authorities follow a principle of respecting their social conscience and conception of justice while encouraging them to master the Japanese spirit. As a stable living

has a close bearing upon the perpetuation of the change in mind, efforts are also made to secure suitable positions for persons under protection and surveillance and to assist them in making their own homes and appreciating the beautiful points of the Japanese family system. Facilities for attendance at school are also provided in some cases.

The Revised Penal Code

The revised Penal Code which was passed by the 76th session of the Imperial Diet (December 1940-March 1941) was promulgated on March 12 and enforced as from the 20th of the same month, 1941.

The existing Penal Code was enforced in 1908 and only one article has been revised since. In accordance with the advice of the Extraordinary Legislative Committee on the necessity of a thorough revision of the Penal Code in order to meet the requirements of the times, the Penal Code and Prison Law Commission were established in the Ministry of Justice in 1927. The Commission which consisted of competent scholars and legal practitioners drafted a tentative scheme for the proposed revision and made it public in April 1940, while continuing their efforts for completing the work of a thorough revision of the existing Penal Code. Unfortunately, however, the Government had to abolish most of the governmental commissions in order to save expenses, the said Commission being among those dissolved so that its work was left unfinished. Thus the complete revision of the Penal Code as contemplated, could not be submitted before the 76th session of the Imperial Diet. But the need for revision at least on important points related to the preservation of peace and order and national defense was keenly felt, and the bill for a partial revision was presented and passed by the Diet.

The cardinal points of the revision are as follows:

(1) Prolongation of the term of detention in workhouses as an alternative to failure in payment of fine, corresponding to the system of enhancement of fines under various laws in recent years.

(2) The extent of confiscation has been enlarged by the provisions of Article 19, to things obtained in reward for a criminal deed as well as things obtained directly by a criminal deed,

or the money acquired by sale of such things, and things possessed by persons other than the criminal which have been acquired from the latter with a knowledge of the crime. When these things are not such as can be confiscated, their value is to be forfeited. The Article purports to completely take away all things obtained by any person through crimes committed against the National General Mobilization Law, the Extraordinary Trade Goods Disposition Law and the laws for economic control.

(3) Rules have been inserted for ensuring the compulsory auction and fair tender in Article 96. Article 96, paragraph 2 provides for the imposition of a penal servitude not longer than 2 years or a fine not exceeding 1,000 yen on those who have hidden or damaged their properties or made disguised assignments or contracted a false debt, in order to defy the confiscation and compulsory auction of their properties. Article 96, paragraph 3 provides for the imposition of a penal servitude not longer than 2 years or a fine not exceeding 5,000 yen on those who have done deeds detrimental to the fair public auction or tender for contracts to be made or material to be purchased by the Government offices, or those who have taken counsel together with the purpose of impairing fair valuation or obtaining iniquitous profits. These provisions purport to prevent tricks of bidders or tenderers who have an unlawful understanding among themselves regarding their common profit but impairing the national benefit.

(4) Penalties for those who have committed offenses against the national peace and order have been newly defined.

Article 105, paragraph 2 prescribes that those who have spread fictitious reports with the purpose of misleading the people shall be sentenced to a penal servitude or imprisonment not longer than 5 years or a fine not exceeding 5,000 yen, and those who have spread fictitious reports with the purpose of inciting a run on the bank or other financial confusion to a penal servitude or imprisonment not longer than 7 years or a fine not more than 5,000 yen.

Article 105, paragraph 3 prescribes that those who have spread fictitious reports likely to mislead the public or cause economic confusion, at a time of war or natural calamities or similar

occasions, shall be sentenced to a penal servitude or imprisonment not longer than 3 years or a fine not more than 3,000 yen. Hitherto there have been no specific rules applicable to these types of offenses, other than the Peace Preservation Law or the military penal codes.

Article 105, paragraph 5 prescribes that those who have done deeds, at a time of war or natural calamities or similar occasions, which may gravely impede the normal progress of national economy, by intentionally confusing the money market, obstructing the production or distribution of important materials and commodities or by other means, in order to get excessive profits, shall be sentenced to a penal servitude for life or more than one year, or, when deemed necessary be concurrently made liable to a fine not exceeding 100,000 yen.

(5) Penalty against causing fire through negligence has been made heavier by the revision of Article 116 and addition of paragraph 2 to Article 117. Those who have caused fire through negligence have been hitherto fined a sum not more than 300 yen, much too light a punishment as compared with that for a similar crime resulting in a forest fire which is a fine up to 1,000 yen, according to the Forestry Law. The former was therefore raised up to 1,000 yen in commonplace cases, and an imprisonment not longer than 3 years or a fine not more than 3,000 yen in the case of fires caused by negligence in the discharge of one's responsibility or by a grave mistake, as, for instance, causing a fire in a factory.

(6) Article 157 has been revised providing for heavier penalties for those who have given false statements in a notarial deed. A sentence of imprisonment for a period not longer than 2 years or a fine not more than 100 yen has been considered too light; and it was revised to an imprisonment not longer than 5 years or a fine not more than 1,000 yen.

(7) Penalties to be imposed on both parties in the case of a bribery have been made heavier by the complete revision of Articles 197 and 198. The strict discipline of government officials for ensuring honest discharge of their duty is always of paramount importance, and it is specially so during the present emergency when the national

economy is being transformed from a free economy to a thoroughly controlled or planned economy.

Revision of the Public Peace Preservation Law

The existing Public Peace Preservation Law was first enacted in 1925 with the purpose of ruling over radical thought movement, and was partly revised in 1928. It consists of only 7 articles and limits the extent of penalties to the organization of secret societies and their activities, or any acts of individuals, with the purpose of changing the national constitution or altering the private property system.

The revised Public Peace Preservation Law which was promulgated on March 10, 1941, consists of 3 chapters and 65 articles; the first chapter defines the persons and extent of penalties which are to come under the purview of this law; the second chapter provides for special criminal procedure different from the general criminal procedure; and the third chapter provides for the preventive custody of suspected persons. It is not, therefore, a mere revision but the introduction of a new legislation.

The definition of activities of offenders who aim at changing the national constitution is further enlarged, while religious bodies which step out of their normal field of activity and deny the national constitution, or blaspheme the sanctity of the Grand Shrine of Ise or the Imperial House, are newly included in Chapter I. The definition of acts of those offenders who work against the private property system has been revised.

In regard to the penalties to be meted out against the criminals who come under the purview of the present law, imprisonment has been abrogated and replaced by penal servitude for all convicts and the terms are lengthened, provisions being made for death penalty, penal servitude for life or more than 7 years for the officials and leaders of secret societies, and penal servitude for more than 3 years for other members.

Article 2 provides for death penalty, penal servitude for life or more than 5 years for organizers or leaders of secret bodies whose aim is to support the secret societies for changing the national constitution, and penal servitude for more than 2 years for members of such bodies. It has been found to

be a general practice for several private bodies to be affiliated with the regular communist societies to which they supplied men and money and when the members of such societies are arrested in a mass raid these tributary bodies supplied new members and aid for the rebuilding of the societies, or to carry on propaganda among the masses. The Article purports to dry up such tributary bodies.

Article 3 provides for the imposition of similar penalties on those who have led men or worked for the organization of secret societies to change the national constitution, in order to nip such societies in the bud.

Article 4 provides for the imposition of penal servitude for life or for more than 2 years on the organizers or leaders of any group, which has not yet developed into a society, working for the overthrow of the national constitution, and the imposition of penal servitude for more than one year on those who have entered or worked for such body, in view of the fact that the recent movement of radical thinkers began to take the form of small units or groups.

Article 5 provides for the punishment of any individual who has worked in any manner for the purpose of changing the national constitution. The existing Peace Preservation Law provides punishment, so far as individuals are concerned, for only those who have provoked, agitated or incited others to criminal action for the purpose of changing the national constitution. But there are other innumerable shrewd methods employed by such persons for executing their radical plans. The revised article provides penalties for all such offenders, the term of punishment ranging from one year to 10 years of penal servitude.

Articles 7 and 8 provide for the punishment of vicious semi-religious bodies. Any religious body which preaches doctrines detrimental to the true conception of the national constitution must be severely punished. Such pseudo-religious bodies aim at a revolution of the national constitution or social order, rather than the spiritual salvation of their followers; in other words, such spurious bodies try to incite their believers to political and social agitation in the guise of religious fervor. The existing Peace Preservation Law which has only social and political movements as objects of con-

trol has been unable to bring to book such so-called religious bodies. The said Articles, therefore, provide for the imposition of penal servitude for life or for more than 4 years on the organizers, officials or leaders of the societies whose aim is to propagate ideas detrimental to the national constitution or blasphemous to the dignity of the Grand Shrines of Ise or the Imperial House, and the imposition of a penal servitude for more than one year on those who have entered such bodies or worked in promoting their aims, similar penal servitude being provided for those who have organized or led groups of men or members and workers thereof for similar purposes.

Special Criminal Procedure Chapter II includes special rules of criminal procedure different from the rules in the common Criminal Procedure. The main points of the new rules are as follows: (1) the public prosecutors are invested with much greater power than usual in arresting, examining, etc. in handling the suspects; (2) the trial in the law court follows the two instance system, omitting the appeal to the Courts of Appeal, but allowing the appeal to the Supreme Court in order to ensure the justice of the final decision; (3) the lawyers are to be designated by the Justice Minister, their number being limited to only two for a defender; and (4) the transfer of the case from one district court to another is allowed when deemed necessary by the competent public prosecutor.

In the case of thought offenses, the crime is attempted secretly and systematically with a great number of associates, and the search of related persons and the grasp of facts are extremely difficult. The power of the public prosecutors, therefore, has to be augmented in order to enable them to take quick actions, while the trial must be speeded up, limiting the number of lawyers for the defenders so as not to make the procedure unnecessarily complicated and prolonged.

Preventive Custody The preventive custody system has been newly instituted by the provisions in Chapter III for keeping the ex-convicts from the society as long as they do not change their thought. The main points are: (1) the persons who shall be kept in custody are the ex-convicts who are first released from prisons or those who are put under the care of the Protec-

tion and Surveillance Commission, and do not change their mind; (2) they are to be kept in custody by the request of the public prosecutor and the decision of the competent law court; (3) the usual duration of custody is two years, but it may be extended for any number of years if necessary; (4) release from preventive custody may be made by the disposition of the competent administrative office at any time when deemed unnecessary; and (5) the request for keeping a person in preventive custody, extension of the term or release shall be made after consultation with the Preventive Custody Commission.

Treatment of Juvenile Offenders

It was in the code promulgated in 1880, that the treatment of juvenile offenders was, for the first time, definitely regulated. At that time, a house of correction was an institution where children entrusted to it by private individuals, deaf and dumb children as well as juveniles committed by the courts were detained and trained.

The first house of correction which was independent of the ordinary prison was the Sumoto House of Correction, on the Island of Awaji, Hyogo prefecture. Other houses of correction were established within the precinct of prison, under the management of the prison staff. The experimental reformatory established in 1885 and the Naritasan Reformatory, opened in 1886, were outstanding. It was not, however, until 1900, that the Reformatory Act was passed. This Act provided that every prefecture should establish its own reformatory (Kanka-in), which should be under the direct supervision of the prefectural government. At the same time, the system of supplementary reformatories was regulated.

In 1907, the present Criminal Code was promulgated. By the new code, the system of detention in the House of Correction, prescribed in the Criminal Code of 1880, was abolished.

Under the new code, the courts in the larger cities usually appointed judges and prosecutors especially qualified for such work to take charge of cases in which juveniles were involved. In 1908, the Ministry of Justice issued an order to all procurators, to the effect that wherever it was considered necessary, juveniles under the age of fourteen, who are not amenable to law, should be committed to prefectural reforma-

tories. At the same time, the Home Ministry instructed prefectural governments to receive such juveniles into their institutions. In 1917, by an Imperial Ordinance, sanctioning the establishment of national reformatories, the central government assumed its share in the care of juvenile offenders. In 1920, after several years of discussion, a special committee appointed by the Ministry of Justice completed a draft of a Juvenile Act, which passed the Diet in 1922, was promulgated on April 17, 1922, and came into effect on January 1, 1923.

A draft of the Act concerning the House of Correction (Kyōsei-in), prepared by the same committee, passed the Diet and came into effect at the same time.

The Act stipulates that persons under 18 years of age shall be regarded as juveniles, though those under 14 are not amenable to law, except when they are sent to the Juvenile Courts by prefectural governors.

Juvenile Courts Juvenile courts are established in Tokyo, Osaka, Nagoya and Fukuoka. These cities were selected as centres for respective districts and because they have the largest number of juvenile offenders and those needing protection.

The Juvenile Courts are special organs with an organization entirely different from that of other courts. Their personnel consists of judges, probation officers and clerks. The system of Juvenile Courts falls under the supervision of the Minister of Justice, and their establishment, abolition and jurisdiction are regulated by Imperial Ordinance. The Minister of Justice has the authority to order the presidents of Courts of Appeal or District Courts, to supervise all Juvenile Courts.

In the Juvenile Court, a single judge hears the trial. The judge supervises the work of his subordinates. If two or more judges are assigned to the same court, the one holding the highest rank exercises this power. A judge may simultaneously hold a position in the Juvenile Court and in an ordinary court, if he is qualified for the position.

Probation officers are either officials appointed by the Government or private individuals commissioned by the Minister of Justice. The former are officials appointed because of their special knowledge and experience in dealing with juveniles. The latter are

selected from voluntary probation workers who have experience in dealing with juveniles. The probation officers assist the judges by providing material used at trials, or by assisting in the supervision of juveniles. They also have the power to summon juveniles before the court, by order of the court.

Court Procedure Cases to be tried by the Juvenile Court are brought through various channels, such as notification, recognition by the Court, transfer by the prosecutor, transference by the ordinary court, commitment by the prefectural governor, or transfer of a case from one Juvenile Court to another.

When a case is brought before the Juvenile Court, the judge makes a preliminary investigation and decides whether to proceed with the case or not. He may order the probation officer to gather materials to help him in this decision. If the case is to be proceeded with the court shall investigate the nature of the case, the character, environment, past record, physical and mental condition, degree of education, etc. of the juvenile, together with his family circumstances and the status and fitness of the guardian. These investigations are to be made principally by the probation officer, and for this purpose, he interviews the juvenile and his guardian in the court or in the juvenile's home. The members of the household of the juvenile, his employer, his former employer, his teacher, his acquaintances and the injured party in the case may also be interviewed or asked to give information in writing. The probation officer then reports to the judge upon the information obtained, and makes whatever suggestion he considers best regarding suitable protective measures in the case. If possible, the court has the juvenile examined as to his physical and mental condition. The court may also order the guardian of the juvenile to investigate the facts in the case, or may entrust the investigation to a protective institution.

The Juvenile Court may summon any person or persons to appear before the court to give evidence, which is considered necessary for the investigation. The court may also order the probation officer to present himself with the juvenile before the court at any time, and, if necessary, it may adopt one or more of the provisional protective measures mentioned above during the period of

the investigation.

In March 1928, branches of the House of Correction were opened adjacent to each Juvenile Court for the purpose of detaining juveniles who have to be supervised during the period of investigation. This provisional protective measure may, at any time be altered or abolished, and if the Court decides that a trial shall not be proceeded with, it is, of course, cancelled. As this is very important to the juvenile, the Court is obliged to inform the guardian whenever such measures are ordered or changed in any way.

Trial and Decision If, after investigation, the Court decides that a case shall be proceeded with, it sets the time for the trial. The Court may, at its own volition, nominate a counsel for the juvenile, if it is considered necessary. The juvenile, his guardian or the protective institution concerned may nominate a counsel, subject to the permission of the Court. Such counsel is chosen from among lawyers, persons engaged in the protection of juveniles, or any other persons whom the court may permit to be chosen.

On the day of the trial, the juvenile, his guardian and counsel are summoned, but the guardian need not be summoned, when the Court considers it unnecessary. For the sake of the juvenile's reputation, the trial is not open to the public, but the Court may permit relatives of the juvenile, persons engaged in juvenile protection or other interested persons to attend the trial. The probation officer, guardian and counsel may express their opinion at the trial; during the statement of which opinions, the Court may order the juvenile to retire, when there is no reason for his presence.

When the trial is completed, the Court renders its final decision. If the Court considers that the juvenile should be tried before the ordinary court, it refers the case to the prosecutor of a competent court. When, in the case of a juvenile who has previously been referred to the Juvenile Court by an ordinary court or a prosecutor, new facts are discovered by the Juvenile Court making it necessary to refer such juvenile back to an ordinary court, this may be done upon consultation with a prosecutor of a competent court. With the exception of such rare cases, however, the Court if protective measures are deemed advisable, orders such measures to be applied to the juvenile. The judge

may select one or more of the following 9 protective measures: (1) to give admonitions, (2) to leave them to the guidance of school principals, (3) to let them solemnly declare their sincere repentance in a written statement, (4) to place them, under certain conditions, in the care of their parents, (5) to place them under the care of temples, churches, protective bodies or other proper persons, (6) to hand them over to the care of the juvenile probation officers, (7) to send them to reformatories, (8) to send them to houses of correction, and (9) to put them under proper treatment in hospitals. When juveniles are admitted to probation or provisional release they are not put under police supervision as is the case with the adults, but are left to the care of the juvenile probation officers. After the juveniles are placed by the Juvenile Court, the probation officers visit them and exercise supervision over them by means of reports submitted by the institutions or individuals with whom the juveniles are placed. They then make monthly reports to the Court. Though the maximum age of juveniles is 18 years, those committed, entrusted or being supervised may continue under the supervision of the Court until they reach the age of 23 years, during which time the Court may at any time cancel or alter its decision regarding said juveniles.

Special Penal Measures Special measures for the punishment of juvenile offenders are:

(1) The death penalty or penal ser-

vitute for life is not inflicted upon a person who is under 16 when the crime is committed. When the crime is so grave the death penalty or penal servitude for life should be passed, the sentence is mitigated to penal servitude or imprisonment for 10-15 years.

(2) When a juvenile criminal should be sentenced to penal servitude or imprisonment for more than three years at its maximum, the minimum and the maximum limits are fixed within the scope of the penalty to be inflicted on the crime committed. And when he should be sentenced to imprisonment for more than 5 years at its minimum, the term is diminished to 5 years. That is to say, in case of a juvenile convict an indeterminate sentence is admitted.

(3) Juveniles sentenced to penal servitude or imprisonment are put in a special jail or in a section of the common prison secluded from adults. If they reach the age of 18 during the term of confinement they may still be kept secluded till they reach the age of 23.

(4) Juveniles sentenced to penal servitude or imprisonment can obtain provisional release (a) after 7 years in case of a life-term sentence, (b) after 3 years in case of (1) above mentioned, (c) after serving one-third of the time in case of (2) above.

(5) Juveniles are not sent to work houses.

Statistics *

The following are the statistics relevant to the judicature of the country:

NUMBER OF COURTS (October 15, 1940)

Supreme Court	Courts of Appeal	District Courts	Branch Courts	Local Courts	Branch Offices
1	Tokyo	12	17	64	419
	Osaka	9	12	43	282
	Nagoya	6	9	30	208
	Hiroshima	6	13	36	257
	Nagasaki	8	17	53	293
	Miyagi	6	16	36	234
	Sapporo	5	3	21	104
Total	1	7	52	87	1,797

FIXED NUMBER OF JUDGES AND PROCURATORS

(October 1, 1940)

Courts	Supreme Court	Courts of Appeal	Local and District Court
Presidents	1	7	52
Divisional heads	8	32	—
Judges	38	90	1,313

Courts	Supreme Court	Courts of Appeal	Local and District Court
Prosecutor's Office			
Prosecutor-General or heads	1	7	51
Prosecutors	13	39	623
Courts	Supreme Court	Courts of Appeal	Local and District Court
Judges	1,541	Interpreters	2
Prosecutors	734	Secretaries	5,547
Judges and prosecutors in reserve	39	Attendants	59
Probationers	240	Employees	5,096
		Total	13,325

NUMBER OF CIVIL CASES HANDLED AT COURTS IN 1939

Courts	Total	New	Settled
Local Courts	768,634	718,457	725,987
District Courts	85,516	58,071	59,665
Courts of Appeal	8,799	4,111	4,542
The Supreme Court	3,690	2,558	2,529
Total	866,639	783,197	792,723
1938	1,043,738	947,984	960,264
1937	1,198,478	1,098,664	1,102,689
1936	1,304,841	1,259,440	1,264,987

NUMBER OF CRIMINAL CASES HANDLED IN 1935-1939

	No. of the Accused	Preliminary Examinations	Cases of First Instance	Cases of Second Instance	Cases of Third Instance
1935	524,358	6,920	121,084	8,278	2,364
1936	505,500	7,100	124,494	10,424	4,123
1937	452,025	5,841	117,038	8,772	3,665
1938	429,059	4,617	108,173	4,915	4,307
1939	375,190	4,275	34,017	4,608	1,580

CRIMINALS SENTENCED IN THE FIRST INSTANCE, JAPAN PROPER

	Total	Penal Servitude			Imprisonment		Monetary Penalties	Custody	Fines
		Death Penalty	For Life	For Limited Terms	For Life	For Limited Terms			
1935	121,662	31	51	42,335	—	116	69,905	—	9,224
1936	120,871	19	37	41,413	—	86	70,856	—	8,460
1937	170,883	31	37	38,527	—	117	63,268	1	8,902
1938	155,863	—	—	—	—	—	—	—	—
1939	147,244	—	—	—	—	—	—	—	—

JUVENILE COURTS

(October 1, 1940)

Courts	4	Probation officers	25
Judges	12	Secretaries	24

Number of New Cases

	Cases brought in	Unpro-ceeded	Placed under pro-tection		Cases brought in	Unpro-ceeded	Placed under pro-tection
Boys	23,624	16,052	6,689	1935	Boys	21,802	14,327
Girls	1,580	585	637	Girls	Girls	1,675	937

		1936			1937			1938			1939			
		Cases brought in	Unproceeded	Placed under protection	Cases brought in	Unproceeded	Placed under protection	Cases brought in	Unproceeded	Placed under protection	Cases brought in	Unproceeded	Placed under protection	
1936	Boys	21,704	13,668	7,023	1937	Boys	24,690	15,784	8,327	1938	Boys	21,537	12,532	8,303
"	Girls	1,468	676	659	"	Girls	1,668	859	737	"	Girls	1,465	651	747
1937	Boys	19,963	11,516	7,881	1939	Boys	21,537	12,532	8,303					
"	Girls	1,453	662	745		Girls	1,465	651	747					

Results of Protection
(Reports right after the release)

	Year	Number of the released	Satisfactory	Unsatisfactory	Report unobtainable
	1936	1,228	754	66	408
	1937	1,282	762	78	442
	1938	1,285	702	80	503
	1939	1,290	742	59	480
Under probation officers	1935	1,040	701	85	254
	1936	1,096	802	62	232
	1937	1,250	924	70	256
	1938	1,441	1,052	55	334
	1939	1,335	904	95	336

STATE CORRECTION HOUSES

(October 1, 1940)

Correction houses	4	Secretaries	12
Instructors	29	Assistants	48
Physicians	4	Employees	10

Number of Juveniles Cared For
(Inclusive of temporary cases)

Year	Received	Sent out	Year	Received	Sent out
1934	1,543	1,206	1937	1,845	1,440
1935	1,626	1,255	1938	2,134	1,680
1936	1,651	1,264	1939	1,753	1,732

Results of Correction
(Exclusive of temporary cases)

Year	Old	New	Sent out as corrected	Sent out by other reasons	Remaining (at the end of the year)
1934	246	208	98	39	317
1935	317	215	167	21	344
1936	344	195	150	21	368
1937	368	201	174	24	371
1938	371	301	204	28	440
1939	440	254	205	17	472

PROTECTION AND SURVEILLANCE STATIONS FOR
THOUGHT OFFENDERS

(October 1, 1940)

Stations	22	Protecting officials	42
Station-masters	22	Secretaries	39
Guiding officials	8	Employees	34

Number of Persons Placed
(During November 1936—June 1939)

	Men		Women	
	Men	Women	Men	Women
Total number of persons placed under protection and surveillance	3,733	212	280	16
The released	878	49	65	2
With satisfactory results of measure			2,790	161
Decrease by change of measure				
Remaining at the end of June 1939				

PRISON SYSTEM

Historical Background

A short historical retrospect of our penal system will show that it is only in comparatively modern times that "Imprisonment" became the recognized method for the punishment of crime.

Up till recent times the idea at the root of the Japanese penal system was minatory. In other words, the so-called principle of general prevention by warning the people at large against the commission of crimes by imposing heavy punishments upon criminals was adopted. Accordingly, the punishments were principally capital and corporal and extremely cruel in character. For instance, the Criminal Code of the Yédo Period (1602-1867) recognized the exposing in public of the heads of persons executed; crucifying, burning at the stake and other similar cruel punishments were imposed. In those days the jails were used merely as places of detention for various offenders until their trial, not as places for reforming offenders. Imprisonment was a very unusual form of punishment, for prisons were unknown and imprisonment was not a legal penalty.

Exile and Banishment Punishments which brought loss of liberty for specified periods to the criminal were exile and banishment. Persons punished with exile were sent to distant islands and places such as Satsuma, islands of the Goto group, Oki, Iki and Amakusa, and there they were forced to work under such miserable conditions that most of them died of starvation. Banishment was a penalty designed to expel persons convicted of crimes from certain fixed areas, and, as the result of the enforcement of this punishment in certain districts industries declined and farms and fields lay waste, giving rise to many social evils such as the increase in the number of ronin (masterless samurai), mushukumono (vagabonds) and other dangerous elements. In 1778, therefore, as a remedial measure, the Tokugawa Shogun-

ate instituted the system of kozan-yékifu (mine labor) and, in 1790, that of ninsokuyoseba (places for the detention of convict-coolies). The system of kozan-yékifu dealt with vagabonds with no previous convictions. These were sent as coolies to pump water out of the Sado gold-mine. In and after 1788, those who had been punished by flogging or branded as ex-convicts by tattoo marks and were homeless or those who, it was feared, might perpetrate crimes in the future were also sent there.

Prototype of Present Prisons The ninsoku-yoseba were to all intents and purposes the prototype of present day prisons and penal servitude. These places for the detention of convict-coolies were located at Ishikawajima and Tsukudajima in Yédo (Tokyo) and at Kamigo, Ibaraki prefecture, and there vagabonds and those who had been punished by flogging or branded as ex-convicts by tattoo marks were detailed to work as oil pressers or at other kinds of labor for a fixed wage, with the ulterior object of giving them such instruction and training as would fit them to lead the lives of respectable members of society. In and after 1820 those who were punished with banishment heavier than that from the confines of Yédo were put to forced labor for a fixed period of time in lieu of that punishment. Thus the ninsoku-yoseba, which had been instituted as workhouses for vagabonds, were turned into prisons for the reclamation of criminals through ordered life and labor. In its correctional idea ninsoku-yoseba was entirely identical with the London "Bridewell," which was established in England in 1550 "to punish, correct, and reform by labor of a diversified nature," and the Amsterdam workhouse (tuchthuis) founded at the end of the 16th century and well known for its motto, "Schrick niet! Ick wreeck geen quaet, maer dwing 'tot goedt, straf ist myn handt, mar liefflijk myn gemoedt." (Do not fear! I will not

take revenge upon you for your misdeed; on the contrary, I wish to lead you to good. Although I am rigorous in handling you, my heart is filled with kindness towards you.) In and after 1790 the prisoners detained in the *abusoku-yoseba* who behaved well and showed notable signs of penitence were liberated on certain conditions and this may be taken as the enforcement of provisional release of prisoners for the first time in Japan. When it is remembered that the system of provisional release of prisoners in Europe originated in a favored release of prisoners from a convicts' colony in Australia in 1791, it is an interesting coincidence that the same system was inaugurated simultaneously both in the West and the East.

Improvement of 1872 In 1871, with a view to carrying out a great improvement in our prison system, the Emperor Meiji despatched the Vice-Director of Prisons, Mr. Jinsai Obara, to Hong Kong and Singapore to inspect and study the prison systems there, and, as a result, the Prison Regulations, the first written law concerning prisons in Japan, were promulgated in 1872. According to the provisions of these regulations, the reclamation and education of the inmates of prisons should be based on love and benevolence. At the beginning of the Regulations, it is stated: "Prison is a place for the incarceration of criminals for chastisement. They are placed there because of love and benevolence towards them and not because of any desire to inflict cruelty upon them; prison is intended for chastising them and not for subjecting them to hardships. Punishment is imposed on them because it is unavoidable and because it is a means of removing evil from the State. The authorities of prisons shall conscientiously observe this principle in treating prisoners." The Regulations were framed on a progressive system and on very advanced lines, but subsequently their operation was suspended for a time, and, in 1881, the Revised Prison Regulations were published. The Regulations were again revised in 1889, and with the revision of the Criminal Code in 1907 the existing Prison Law was enacted and published the following year.

Management of Prisons

Prisons are placed under the control of the Minister of Justice. Prior to 1900 they were under the control of the Minister of Home Affairs, but since that year

they have come under the supervision of the Minister of Justice. With the transfer of affairs relating to prisons from the Ministry of Home Affairs to the Ministry of Justice, the Bureau of Prisons was established in the latter Ministry for the administration of matters concerning the execution of sentences, prisons, provisional releases of prisoners, and the identification of criminals by fingerprints.

Prison superintendents are appointed from among officials ranking as governors and assistant-governors by the Minister of Justice, and branch-prison the task of directing and supervising governors from among assistant governors and chief wardens.

Classification

In the Japanese prison system there are four kinds of prisons: (1) prisons for those sentenced to penal servitude; (2) prisons for those sentenced to imprisonment; (3) houses of detention for persons destined to spend time in detention, and (4) prisons of confinement for (a) those sentenced to death, (b) those awaiting trial. In view of the different characters of these prisons, they should, in principle, be established independently of one another, and, in the case of their being erected in the same area, they are usually separated. At present, workhouses are not classified as prisons, but are attached to prisons for the sake of convenience.

Treatment of Prisoners

Object of Treatment As to what is the primary and fundamental purpose of punishment by imprisonment, nothing is stated in the Criminal Code or in the Prison Law now in force. But Japanese juridical authorities have for more than ten years endeavored to reform prisons

Classification System Inasmuch as punishment by the restriction of personal liberty is enforced today principally with a view to education, criminals are properly classified according to ages, characteristics, terms of imprisonment, numbers and kinds of offences, and are then confined in different prisons so as to facilitate the enforcement of adequate measures for their education in accordance with their categories and, further, to prevent prisons from becoming breeding-places of crime through mutual contact and contagion as the result of promiscuous con-

finement of all grades. When it is impossible to distribute them among independent prisons and they are confined in the same area, prisoners are usually classified strictly, and confined separately, according to their categories. There are prisons for minors at Odawara, Kawagoé, Hinéji, Okazaki, Iwakuni, Kurume, Morioka, and Hachioji, and in Hokkaido for the confinement of those under 18 years of age sentenced to penal servitude or imprisonment, prisons for aged persons at Hamamatsu and Yonago and for women at Tochigi, Miyoshi and Miyazu. Further, there are prisons for the confinement of persons sentenced to terms of imprisonment exceeding 10 years at Kosugé, Takamatsu, Hiroshima, Okayama, Miyagi, and Abashiri; the Abashiri agricultural prison is intended for training prisoners as agricultural laborers. At Uraga, located in an old warship anchored off the port, is a branch of the Odawara prison for minors. There juvenile offenders are given training as fishermen, and sometimes engage in coastal and deep-sea fishing-vessels or steamers.

In addition to the above-mentioned classified confinement, with a view to proper individualized treatment, they are examined by doctors, alienists, psychologists and educationists to find out their psychopathic idiosyncrasies, hereditary natures, physiological peculiarities, adaptabilities to occupations, educational possibilities, etc. in different prisons previous to their confinement. Further, a "social diagnosis" is made by collecting reports on them from city, town and village offices, police stations, schools, and organizations devoted to their protection in order that they may be suitably classified for treatment.

Progressive System A treatment on the progressive system is accorded to convicts who form the bulk of the inmates of prisons. This treatment aims at leading them to repent and their treatment is graded in proportion to their aspiration and diligence, thereby gradually bringing them to the conditions of ordinary social life. Any prisoner committed for the first time is kept in solitary confinement for a certain period of time and a close study is made of him. On the basis of the results he is classified according to character, physical and mental condition, number of convictions, age, nature of crimes, term of service, home, health and thought.

The Four Stages The stages of the progressive treatment are: (1) those under investigation; (2) those in course of correction and training; (3) those in process of improvement; and (4) those who have developed a sense of responsibility. After being subjected to a study of character, convicts are received into the first class to begin with. Those who are accorded this treatment are given fixed marks according to their terms of imprisonment and promotion to higher classes is given only when a sufficient number of marks have been earned by diligence, good conduct, and growth of the sense of responsibility and of the will for self-improvement. Those belonging to the first and second classes are kept in confinement in association, while those belonging to the third class are kept in confinement in association in the day time, but in solitary confinement at night, those belonging to the fourth class are confined in a special room.

The Treatment Governors of prisons may cause convicts in each workshop to elect some from among them to keep the workshop in good order and look after other necessary matters. The elected ones must be popular, trustworthy and belong to the third class. Prisoners belonging to the third class must jointly, once a month, carry out the work of cleaning and sweeping the prison grounds and keeping them in order. Except in cases of special need, prisoners belonging to the fourth class do not undergo physical examination or have their cells searched, and, further, are permitted to talk with one another so long as it does not interfere with the maintenance of discipline. They are also permitted to elect two representatives that they may express their desires to the authorities. These representatives are nominated by the governor of the prison concerned from among several candidates elected by prisoners belonging to the fourth class. Prisoners of the fourth class may be permitted to take walks in a place designated for that purpose in the prison grounds in hours of recess, or hold meetings belonging to the fourth. Prisoners, take walks in a group, or hold athletic meetings on days free from labor. They give a pledge to the governor, holding themselves responsible for the physical examination of those of their own class, for the search of their cells and keeping them in order, and

the maintenance of order among themselves. Should any one of them violate the pledge, the privileged treatment will be suspended for some or all of them. Any one of those belonging to the first class who earns more than ¥5.00 of labor may be permitted to use less than one-fifth of the monthly total in buying postage stamps and in other ways that are deemed necessary; any one of those belonging to the second class, less than one-fourth of the monthly total; any one of those belonging to the third class, less than one-third of the monthly total; and any one of those belonging to the fourth class, less than one-half of the monthly total. While those of the first class are not permitted to change the kinds of labor they engage in, those of the second class and up are permitted to do so. Those who have superior skill or high efficiency and belong to the third class are charged with the task of directing industrial work and those who are similarly qualified in the fourth class are given the task of directing and supervising it. Those of the third class who have particularly superior skill and high efficiency are permitted to work for their own profit outside of working hours, but such free time is limited to two hours per day.

Moral Education Prisoners belonging to the first and fourth classes are chiefly given individual moral and religious instruction, while those belonging to the intended for training prisoners as agricultural and third classes receive the same instruction en masse. Listening to music broadcast on the radio and listening to the playing of gramophone records is permitted to those belonging to the second and higher classes. The time for the enjoyment of this privilege is fixed at twice a month for those belonging to the second class, which may be increased to three times and four times for those belonging to the third and fourth classes respectively. The governor may permit members of the third and fourth classes to hold moral cultural meetings, the number of times being limited to once for those belonging to the third class and twice for those of the fourth class are permitted to read books or see pictures in the prison library on days free from labor, and may also borrow suitable newspapers and magazines from it. Those of the third and fourth classes may be permitted to play athletic games,

the number of times for such amusements being limited to once a month for those of the third and twice for those of the fourth class. While those belonging to the first class are permitted to interview or send letters only to their relatives and those who are concerned with their protection, those belonging to the second and higher classes are permitted to interview or send letters to those who do not interfere with their moral instruction, besides their relatives. The number of interviews and the number of letters that may be written increase in proportion to advances in class.

Provisions, drinks and other articles for the maintenance of the health of prisoners are uniform and do not differ according to classes. Those belonging to the fourth class are given white garments, are permitted to decorate their cells with flowers or pictures, and are lent table-ware and other sundry articles for common use.

Suspension of Progress In case any prisoner violates the prison regulations, the treatment on the progressive system may be suspended for up to a period of 3 months, but in case it is recognized that there are certain circumstances which have to be taken into consideration before the suspension or in case the prisoner shows signs of sincere penitence the enforcement of the sentence of suspension may be postponed for a fixed period of time. If he further violates the prison regulations during that period, the sentence of suspension will be enforced, but if he passes the said period without any further violation it will not be carried out. Further, in case a prisoner shows marked signs of penitence after the sentence has been delivered, this will be taken into consideration and the sentence repealed in full or in part. In case a prisoner who has been punished with suspension of the treatment again violates the prison regulations, he may be transferred to a lower class according to the circumstances of the case. When a prisoner who has been punished with such degradation shows marked signs of penitence he will be restored to his former category without reckoning his marks.

When any person of the fourth class has served one-third of his term of imprisonment and the prison governor considers him fit for provisional release his case should be reported to the Minister of Justice. Even one

who belongs to lower classes and who has served one-third of his term and shows notable signs of penitence and is considered to be fully adapted to social life may be specifically granted provisional release, subject to the approval of the conference for provisional treatment on the progressive system.

Prison Labor

Paragraph 2 of the Japanese Criminal Code provides: "Any convict sentenced to penal servitude shall be detained in a prison and subjected to a fixed amount of labor." This "fixed amount of labor" constitutes prison labor. It is not legally imposed on convicts punished with imprisonment or custody, but its imposition is permitted in case they desire it. Since the institution of the *ninsoku-yoseba* at Ishikawajima hard labor has been recognized as an essential part of the discipline of prisoners, and present-day criminal theory in Japan is opposed to punishment by the restriction of personal liberty without the imposition of hard labor. Accordingly, prison authorities are encouraging industrial work at their own request by prisoners punished with imprisonment or custody.

The Three Systems Industrial work in prisons is managed on three systems, viz.: the public account system, the "made-to-order" system, and the contract system. Under the public account system, a prison itself purchases materials, provides itself with the necessary machinery, implements and tools and makes prisoners manufacture or repair articles or carry on labor under the direction of prison officials, and sells the products. Under the "made-to-order" system, the chief materials are supplied by the outside buyers and prisoners either manufacture or repair articles under the direction of industrial work experts and assistant industrial work experts on the prison staff, and when the articles are either manufactured or repaired the wages of the workers and the cost of requisites in the manufacture or repair are calculated and the prices of the articles fixed by the standard of current prices. The articles are then delivered to the buyers on payment of the account. Under the contract system, applicants have to supply not only materials, machinery, implements and tools, but also experts for the direction of work, a prison only offering the labor of prisoners and re-

ceiving their wages in exchange. Under the contract system now in force in Japan, the prison authorities undertake the supply of provisions, etc. to prisoners, as well as undertaking their supervision and selection for work, and nothing like the lease system that was in vogue in South American countries at one time is recognized.

Among the above-mentioned three different systems, the public account system does not permit any third party other than prison officials to direct prisoners in the prosecution of their work as in the case of the contract system and, moreover, enables the prison authorities to select and impose on prisoners such kinds of work as are suited for their moral instruction and vocational education. In these respects, it is considered to be the most desirable for the enforcement of penological measures and its adoption is greatly encouraged.

Training for Occupations In imposing work on prisoners, the most suitable kinds of work are given them not only by taking into consideration health, economy, terms of imprisonment, ability, occupations in free life, and future means of livelihood, but also by scientifically examining their individual adaptabilities to occupations. Industrial work in prisons is the most suitable means of giving moral instruction to prisoners; in particular, training them in certain lines of work in the course of detention is the best way to prevent them from perpetrating crimes once again. Since 1926, therefore, houses for the training of prisoners for occupations have been erected in different prisons throughout the country and there prisoners have been trained for occupations requiring special skill, such as those of carpenters, joiners, furniture-makers, tin-smiths, plasterers, timber-mill workers, painters, smiths, shoemakers, etc. The term of training is 6 months, during which fundamental theories and practice are taught.

Rewards Given as Favors Working hours are from 12 to 13 hours a day and differ according to months. It is permitted to give educational or moral instruction to prisoners or allow them to take exercise within these hours. A time of recess—15 minutes in the morning and 25 minutes in the afternoon—is given them. All the income from the work of prisoners goes into the national treasury, irrespective of whether

It arises from work or from wages. A prisoner who has worked may receive a reward as a favor. This gratuity varies from ¥0.50 to ¥10.00 per month and the sums are fixed according to conduct, character, kinds of work, and the results of the work done. Anyone who does particularly superior work is given an additional reward not exceeding ¥10.00. The reward for his work is, in principle, not given to a prisoner until he is released from prison, but (1) in case a prisoner is entitled to ¥10.00 a month or more, and the money is needed to support his father, mother, wife, child, or to compensate the sufferer from his crime, or to purchase books or other necessary articles, one-third of the amount may be given him while in confinement, and (2) in case it is particularly necessary to do so for the sake of a prisoner, the entire reward may be handed over to him, irrespective of its amount and the way of spending it. In case a prisoner has been injured or has fallen sick while at work, and has died in consequence or has become unable to carry on any work, he may be entitled to a pecuniary reward according to the circumstances of the case. This reward is fixed within the limit of from ¥50 to ¥180 according to the details of the case.

The Hito Prisoners are given moral instruction en masse on national holidays, on the first two days of January and the 31st of December, or on Sundays. The same instruction is also given prisoners individually in case it is deemed necessary. It is chiefly given by chaplains appointed from among priests of the Shinshu sect. Adult prisoners who are uneducated and those under age receive an elementary school education. The latter are also given military training, which gives very satisfactory results in the way of moral instruction. Prisoners are permitted to read books and look at maps and pictures, unless it is injurious to the good order of the prison, but writings concerning current topics are forbidden. As, however, it is needful to keep them acquainted with changes in the condition of society, lest they should fall behind the times, a specially edited newspaper, "Hito" (Man) is issued and distributed among them.

Aid of Discharged Prisoners

Criminals come in general from among the poorer people, and when

they are released from prisons after the completion of their term they are greatly handicapped in entering into gainful occupations or getting positions in shops or offices, being known as "Zenka-mono" or "former criminals," and dealt with as such by society, and it becomes difficult for them to earn a livelihood, so that they are forced into further crimes. For the protection of the discharged prisoners measures have to be employed for giving moral instruction and a knowledge of some useful arts while providing them with necessary funds so that they may establish themselves in some suitable occupation. These works have been entirely left in the hands of volunteer social workers who have made valuable contributions. But the number of establishments for this purpose is insignificant as compared with the number of ex-convicts who are in immediate need of protection and the fund contributed by benevolent persons to these protection houses is too insufficient.

The Organizations Among these organizations, one noted for its systematic constitution and management was the Shutsu-gokunin Hogo Kaisha (Ex-Convicts Protection Co.) established by Mr. Meizen Kinbara in Shizuoka prefecture. In 1907, the Government decided to make an appropriation of ¥10,000 from the national treasury every year for the encouragement of the work and later, in 1912, the sum was increased to ¥30,000. With the development of the work the number of organizations grew and was returned at 211 throughout the country at the end of 1912. In 1913, Baron Hachiroyemon Mitsui, head of the House of Mitsui, donated ¥750,000 to the work, and with this money the Hosen-Kai, a foundation, was established for the control of, and extension of help to various organizations interested in the work throughout the country. In 1923 the Ministry of Justice created a Section for the work of protection of ex-prisoners, which supervises the various organizations carrying on this work. In 1925 the Government subsidy was increased to ¥100,000, and since 1923 the Imperial House has made an annual grant to encourage the work, with the result that the work has made steady development, the organizations today number approximately 800.

The Beneficiaries The persons protected by these organizations are not limited to those who have served the

terms of their sentence but include those who have been provisionally released; those whose prosecution is suspended; those the enforcement of whose sentence is suspended; and those who have been released from punishment for minor offences; as well as the members of the families of those who are detained in prisons. The method of protection is roughly classified into (a) quarters and protection, (b) indirect protection. Those to whom the method (a) is applied are quartered in places

specially selected by the above-mentioned organizations and are given board, lodging and clothes as well as employment. Those to whom the method (b) is applied are not directly protected, but visits are paid to their fixed places of residence from time to time so as to give them advice and suggestions. Those to whom the method (c) is applied are given only temporary help at the time of liberation from prisons such as providing them with clothes and other necessities and journey money.

PRISON STATISTICS

NUMBER OF PRISONS (December 1, 1940)

Prisons	53	Branches	106	Total	159
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FIXED NUMBER OF PRISON OFFICIALS

(October 1, 1940)

Governors	43	Pharmacists	12
Assistant governors	41	Chaplains	151
Chief warders	204	Instructors	37
Chief sub-warders	506	Industrial work experts	19
Juvenile-examiners	4	Assistants, ditto	495
Interpreters	4	Warders	8,182
Doctors	104	Employees	639
Assistant doctors	46	Total	9,739

NUMBER OF PRISONERS KEPT IN PRISON HOUSES

AT THE END OF EACH YEAR

	1935	1936	1937	1938	1939	Average of the 5 years
Convicts	51,094	51,977	49,132	46,686	43,260	48,430
Criminal defendants	5,372	4,675	4,012	3,483	3,662	4,241
Detained in the House of Labor	490	462	362	269	169	350
Infants	14	9	6	4	7	8
Total	56,970	57,123	53,512	50,442	47,098	53,029
(Women in the total)	915	919	830	702	741	821
Daily average	56,167	57,440	56,566	52,581	48,873	54,125

YEARLY COMPARISON OF THE NUMBER OF NEW CONVICTS

Year	1934	1935	1936	1937	1938	1939
Criminal Code Offences						
Theft	20,646	18,848	19,167	18,204	17,292	14,403
Gambling and lotteries	1,652	1,838	1,920	1,870	1,831	2,046
Fraud and usurpation	7,372	8,097	7,621	7,138	6,443	5,314
Forgery of documents, negotiable securities and seals or stamps	451	381	418	344	307	344
Injury	1,523	1,494	1,303	1,158	966	880
Receiving stolen articles	544	418	474	608	559	479
Murder	709	642	647	608	514	450
Burglary	776	729	731	673	555	477
Incendiarism	758	701	584	501	390	302

Year	1934	1935	1936	1937	1938	1939
Interference with the execution of official duties	94	48	31	41	30	19
Destruction and concealment of another man's property	18	25	21	16	14	11
Forgery of currency	46	24	44	24	11	11
Abortion	44	54	34	30	17	21
Obscenities, illicit sexual intercourse and bigamy	332	287	261	288	253	303
House-breaking	245	249	270	312	504	573
Perjury	43	38	24	34	10	15
False accusation	16	17	22	32	22	6
Others	555	571	573	570	406	346
Offences against Special Laws						
Criminal law of the army and navy	19	42	71	91	140	179
The forest law	43	30	26	25	16	11
The military service law	14	11	18	21	16	32
The mail and telegraphy law	5	—	1	6	5	11
Others	1,203	1,034	3,360	2,575	1,074	437
Police laws & prefectural laws	4,986	5,520	4,143	3,550	2,932	1,710
Total	42,094	41,093	41,764	38,719	34,307	28,380

YEARLY COMPARISON OF THE NUMBER OF NEW CONVICTS
ACCORDING TO THE TERM OF SERVITUDE

Year	1933	1934	1935	1936	1937	1938	1939
Penal Servitude							
Penal servitude for life	61	64	55	43	34	44	25
Over 15 years	2	—	—	6	—	—	—
Less than 15 years	53	63	38	57	43	36	26
Under 10 years	996	963	816	804	684	607	623
Under 5 years	2,309	2,300	2,154	2,040	1,951	1,947	1,828
" 3 "	3,685	4,046	3,719	3,330	3,490	3,220	2,896
" 2 "	7,479	8,462	7,640	7,638	7,097	6,938	6,211
" 1 year	13,111	13,651	13,472	13,730	12,971	11,846	9,972
" 6 months	5,033	5,306	5,282	5,244	4,881	4,128	3,314
" 3 "	1,771	1,882	1,970	2,925	2,520	1,884	1,566
Total	34,554	36,782	35,191	35,849	33,704	30,679	26,486
Imprisonment							
For life	—	—	—	6	1	—	—
Over 15 years	2	—	—	6	—	—	—
Less than 15 years	1	—	—	1	—	—	—
Under 14 years	3	—	—	8	—	—	—
Under 5 years	11	—	—	11	4	—	3
" 3 "	1	—	3	4	4	1	2
" 2 "	1	1	2	4	6	4	3
" 1 year	5	4	5	41	61	40	17
" 6 months	48	40	47	319	394	199	49
" 3 "	368	238	313	1,355	968	437	96
Total	440	283	370	1,755	1,438	681	170
Detention	4,458	4,994	5,518	4,149	3,554	2,932	1,716
Death penalty	28	35	14	11	23	15	14
Total	39,480	42,094	41,093	41,764	38,719	34,307	28,380

POLICE SYSTEM

Authority Vested in State In Japan police authority is entirely vested in the State and is not delegated to other public bodies. The police are administered

in the name of the Emperor by the Minister of Home Affairs through the Superintendent-General of the Metropolitan Police, in Tokyo prefecture,

governors of other prefectures and the Hokkaido procurator. Although nominally under the Governor of Tokyo prefecture, the Superintendent-General of the Metropolitan Police Board in Tokyo takes his orders direct from the Home Minister as the Board has many political responsibilities unknown in other prefectures. The appointment is actually a political one, the ordinary police business being carried out by the Chief of Police. In Hokkaido and other prefectures the highest police official is the Chief of the Police Division. Under the Chiefs of Police are the police superintendents, inspectors, assistant inspectors and policemen. A police superintendent is appointed chief of a police station or secretary of a Police Division, or in Tokyo and Osaka prefectures he may be appointed inspector over several police stations. A police inspector or an assistant police inspector may, in some cases, be appointed chief or secretary of a police station. Policemen are divided into sergeants, indoor and outdoor service men, special service men, and police-detectives.

As mentioned above, police officials carry out judicial functions, and when acting in the capacity of judicial police officials and under the dictates of the public prosecutors they execute warrants of arrest or detention and arrest persons in flagrant offence. They may seize private possessions or search a house by order of a Court of Justice, an examining judge or a public prosecutor, or help a public prosecutor in the investigation of criminal cases.

In Times of Peace and Crisis In times of peace the maintenance of public order rests with the police. Individual policemen wear sabres. Pistols are carried only in special cases though in the police force there are troops of armed constables, while if matters become too serious and on special occasions, the gendarmerie is called on for help. The gendarme is a kind of military policeman, but at such times as the police force is too weak to keep public order, a Governor may ask for the aid of the gendarmerie. Moreover, at a time of crisis or extraordinary social disturbance, the army takes the place of the usual police force and acts with an extraordinary and limitless authority. The occasions which may call forth the military power for keeping public order are as follows: (1) when the country or a district is placed under

martial law in times of war, (2) when a district is put under martial law for the maintenance of public order, (3) when the governor asks for the help of the army for subduing social disturbances, and (4) when a Divisional Commander recognizes the need of military power for keeping local order in an emergency in which the request from other authorities is too late.

Police Business

Police business in Japan is many sided, and may be classified into 4 main lines and 24 kinds:

Public Peace (a) supervision of publications. The publication of all kinds of printed matter should be reported and a copy of each must be sent to the authorities. Secret publication is strictly forbidden. A sum of money as guarantee of good faith has to be deposited by the publishers of newspapers or periodicals which deal with political problems. The name of the person responsible for any publication must be printed on the publication. Secret matters which come under the control of the public procurators, the Ministers of the Army and the Navy, and the Minister for Foreign Affairs must not be reported in newspapers or periodicals. The Home Minister may prohibit the publication of a periodical or any other printed matter which he considers detrimental to public welfare and morals.

(b) Supervision and care of public meetings, organization of societies and mass movements. According to the Public Peace Police Law, all public meetings on political questions and some other meetings which come under control of the authorities must be reported to a police-station beforehand. A policeman may be present at such a meeting and may stop a speech or close the meeting. The organization of such associations or societies as may endanger the existing form of Government and system of private property is strictly forbidden. The said P. P. Law inflicts heavy penalties on those who break these regulations.

(c) Supervision of businesses or commercial shops. Most businesses are free, but in some cases some kind of police supervision is necessary in the interests of public welfare, hygiene, prevention of damage, the safety of traffic, social economy and price control. For instance, such shops and businesses

as inns, public baths, employment exchanges for geisha and prostitutes, credit information businesses, barbers, seal or stamp engravers, old clothes dealers, peddlers and stall-holders are inspected or taken care of by the police. Pawnshops and cheap or second-hand shops are under special regulations and police inspection and supervision is thoroughly practised as many stolen articles find their way into these shops, and lead to excellent results in the arrest of thieves and burglars. Guides, scribes and employment exchanges for profit are also under special regulations and strict supervision. The police business in connection with the State policy for price control began since 1938, and the police force was augmented.

(d) Religion. It is the duty of the police to prevent the desecration of shrines and breaches of the peace in temple grounds. Superstitions and superstitious actions are prohibited by the Police Penal Law.

(e) Accidents. The police take charge in cases of fire, flood, explosion, of people being injured, etc. Regulations are issued on the handling of guns and explosives; the wearing of swords or the like is strictly forbidden; the handling or selling of poison is under a special regulation. Sulphur and oil businesses are under police care also. Buildings are under police supervision for their beauty, fire-proofness, and hygiene; factories, warehouses, theaters, and public resorts receive special attention. Crematories, slaughter-houses and incinerators must not be within residential or commercial districts of cities. Regulations regarding buildings are stricter than in Western countries because of the large number of wooden houses liable to fire and the constant fear of earthquakes. Electricity and gas businesses must not endanger the lives of people. Mines are under a special police regulation as they are most liable to fatal accidents. Prevention of floods also comes into the sphere of police business.

For the prevention and extinction of fires, fire-brigades are established in cities under the control of the Chief of the Police Division in the prefecture. In Tokyo prefecture, a fire division is established in the Metropolitan Police Board and fire-brigade stations are located in different parts of Tokyo. In the larger cities, Osaka, Kyoto, Yokohama, Kobe and Nagoya special fire-brigade

stations are established by the State. In the smaller municipalities fire-guilds are established at the expense of local self-governments. The firemen are volunteers and differ from those in the said cities who are officials of the State.

(f) Public morals. The police look after the maintenance of good public manners and morals. Japan has a licensed prostitute system and forbids private prostitution and conniving at it. Through the efforts of Christian and other religious and public bodies and the growth of other means of pleasure, prostitution is growing less, but it is the duty of the police to see that the prostitutes are treated as humanely as possible as long as their term of service exists. All pleasure resorts such as theaters, places of performances, wrestling, movies, etc. are carefully supervised and any obscene or immoral performances prohibited.

Restaurants, dining rooms, bars, cafes and other eating places are under police supervision. The laws for prohibiting liquors and smoking to minors, the prohibition of lotteries, misbehavior in the street or outdoors, and the regulations regarding street advertisements and the erection of monuments must be enforced.

(g) The care of men who are a danger to public peace and welfare, juveniles who are addicted to bad habits, ticket-of-leave men, the insane, beggars and vagrants are supervised by the police.

(h) Actions which may harm others such as forcing an interview, extorting contributions, blackmail, causing disturbances, obstruction, etc., are forbidden by the Police Penal Law. Deceitful actions, spreading false reports, and the mishandling of dead bodies comes under the care of the police. Obstructing officials in pursuit of their duty is strictly forbidden. The care of lost articles, prohibition of deceitful religious actions, the supervision of "mu-jin-ko" and "tanomoshi-ko" or mutual financing associations come under police power to some extent.

Public Hygiene The problem of the health and hygiene of the people is one of the greatest concerns of the Department of Home Affairs, and in many points the responsibility of looking after such cannot be confined to the police alone, though in its direct management the police have much to do.

(a) Prevention of epidemics. For the prevention of epidemics there are many laws in force, the most important of them being the Epidemic Prevention Law, the Regulation for the Medical Inspection of Aviators, the Seaport Quarantine Law, the Vaccination Law, the Tuberculosis Prevention Law, the Trachoma Prevention Law, the Leprosy Prevention Law, the Venereal Diseases Prevention Law and the Parasites Prevention Law. The water police help in the medical inspection of passengers and goods arriving in vessels from abroad. The annual compulsory cleaning of individual houses and public buildings, drains, wells, dumping grounds, etc. is supervised by the police. When an epidemic breaks out policemen are used to try and confine it to as small an area as possible.

(b) Medical. As the health and welfare of the people depend on proper medical attention, doctors, dentists, midwives, nurses, masseurs and acupuncturists are under special regulations, as also are druggists and pharmacists. Poisonous chemicals are well looked after.

(c) General Health. A law is in force prohibiting the sale of unwholesome food, and utensils for eating, drinking and preparing food are under police supervision.

Traffic Police (a) Road. The police are responsible for safety on the streets. "Walk and drive on the left" is the rule of the road in Japan.

(b) Vehicles. Railroads, electric cars, automobiles, trucks, waggons, rikishas, bicycles, etc. are under police supervision.

(c) Water police. The water police look after foreign-going vessels entering and leaving open ports, navigation in closed ports, rivers and lakes, and the business of steamship companies doing a coastal trade.

(d) Ocean navigation has many international ramifications and though there are countless matters which ought to come under police supervision it is separated from common police business and put under the administration of the Department of Communications.

(e) The aviation police are under the supervision of the Minister of Communications.

(f) Colonial police come under the control of the Minister for Overseas Affairs except in some cases which may

come under the supervision of local governments.

Police and the People

The function of the State, as far as it concerns the economic life of the people is largely protective and administrative and certain laws and ordinances of the State have to be imposed on various businesses in order that the people shall be fully protected. The police work by orders from higher authorities at the request of the Ministers of Agriculture and Forestry, Commerce and Industry, and Finance.

(a) Banks, savings banks, mutual financing associations, negotiable security businesses, trust businesses, insurance businesses, commercial exchanges, the central wholesale markets in the six largest cities, foreign trade business in important articles, weighing and measuring machine businesses, and auditors partially are under police supervision or limitations.

(b) Agriculture is supervised by the police in such matters as the prevention of the spread of noxious insects, the control of plants imported or exported, the fertilizer industry, agricultural warehouses, the sericulture industry and the control of rice imports and exports.

(c) The hygiene and prevention of epidemics among domestic animals is looked after by the police. Many laws are enforced regarding the improvement of animals, and police power is needed to see that the regulations are carried out, especially in connection with horse-racing.

(d) Forestry police mainly prevent damage to the forests.

(e) Fishery police protect the propagation of aquatic animals and at the same time look after the safety of the fishermen. There are many laws and regulations on fisheries, whale-fishing, fishing boats, etc.

(f) The hunting of beasts and birds is limited to those mentioned in the revised Game Laws of 1918, the seasons and districts of hunting are put under police regulation.

(g) For the protection of laborers there are numerous laws in force, for instance, the Factory Law, Laws on the limitation of age of factory or marine workers, the Labor Accident Prevention Law, the Mine Law, and the Ordinance regarding the enlistment of workers. Policemen either help factory or

mine inspectors or directly handle matters mentioned in these laws. Labor movements and disputes call for the use of police power frequently.

POLICE STATISTICS

	1935	1936	1937	1938
Police offices				
Police stations	1,201	1,203	1,205	1,206
Water-Police stations	24	23	17	16
Branch stations	4,672	4,742	4,704	4,757
Police-boxes	14,240	14,242	14,209	14,217
Police officials:				
Divisional directors	52	52	52	52
Police superintendents	346	351	412	415
Police inspectors	1,548	1,607	1,675	1,726
Assistant police inspectors	3,620	3,909	4,021	4,269
Policemen	59,425	60,609	63,692	67,133
Total	64,991	66,528	69,852	73,543
Fire-brigade stations	232	241	243	244
Fire-brigade officials	3,893	3,981	17,375	17,539
Firemen	12,386	12,646	—	—
Fire-guilds	11,446	11,477	11,489	11,516
Volunteer firemen	2,105,874	2,139,869	2,149,608	2,141,487

CHAPTER XXVIII

EDUCATION

NIPPON UNIVERSITY

Nippon University stands on the basis of the fundamental character of the Japanese Empire and on the traditional spirit of the country since its founding. At the institution, learning and science of Japan and foreign countries are taught, so that its students are led to master the most abstruse principles and reach the mysteries of science. Its educational atmosphere is genuinely Japanese and its scholastic status is international.

ITS HISTORY AND SCALE

Nippon University was founded in 1889 through support of the then Premier Prince Aritomo Yamagata, the then Justice Minister Count Akiyoshi Yamada, Count Kentaro Kaneko authority on the Imperial Constitution and other luminaries with the object of enhancing the study of law based on moral virtues traditional to Japan. At first, the university was a special law school. It has marked a yearly development, and it was not until 1920 that the school was enlarged to a university status in accordance with the university ordinance. The university thus set up consisted of the department of law, department of literature, department of commerce, with their respective junior departments, higher normal department and others. In later years, the university got further increased departments such as religion, sociology, art and dental surgery. A higher technical school also was established by the university.

The great earthquake-fire of Kanto in 1923 razed the major portion of the university equipment. Reconstruction was started through enthusiastic efforts of Dr. Mannosuke Yamaoka, now President of the university, and men under him. The result was that the university buildings were restored to the former status in a brief period. Not only this, but also the university opened its medical department with its large-scale hospital in 1925. Plus this, the university established its engineering department and overseas department and all this equipped the institution with full capacity as one imposing com-



Library and
DR. MANNOSUKE YAMAOKA
President of Nippon University

binational university. Other noteworthy facts are that the university library was elaborately enlarged and a special dental hospital had its equipment perfected. Lectures on Kodo, or the Imperial Way, exclusive to Japan also were started then and have been conducted since. Considering the recent tendency in encouraging science, the university has just established an industrial chemical course in its engineering department. Nippon University maintains five middle schools, four commercial schools and three technical schools under its direct management. Through its grand scale and perfected equipment Nippon University has now attained a status ranking in the list of the first-class universities in the world.

(Continued on front of Religion Section)

CHAPTER XXVIII

EDUCATION

Historical Background

Chinese letters and Confucian books were first introduced to Japan in the third century, and it was then that the civilization of the country made a real start. From the nearby peninsula of Korea came sericulture, weaving, brewing, and the art of the blacksmith. It was about this time that the Imperial Prince Wakairatsuko established a Court School.

In the sixth century Buddhism came to the Island Empire to give added material progress to the Japanese civilization, and in 607 the Imperial Prince Shotoku-taishi (see Chapter III) caused the Horyuji Temple to be built at Nara and there he established a school in the temple. These were the earliest schools of Japan.

In the latter half of the seventh century a college in the capital and some provincial schools were established to educate officials, according to the Taiho Laws. Later, in the Heian period, the courses of study became encyclopaedic and both public and private schools were established. In the Muromachi period school education suffered a decline and only two places of study were recorded, namely, the Kanazawa Library and Ashikaga School, although there might have been private lecture halls kept secretly by scribes and Buddhist monks.

The Tokugawa Shogunate encouraged the study of Confucianism and several schools of this moral system and Chinese philosophy were introduced, and education extended to the common people. There were established many schools; the highest one was called the Shohéi Hill Academy or Shohéi School, which was established by the Shogunate. The central government had many other schools, while each local clan government also had its own schools. In addition to these, private schools and "tera-koya" appeared all over the country for the education of the people in general.

"Tera-Koya" Education

The "tera-koya" needs some special explanation, as it played the most important part in the education of the masses before the Meiji Era, and laid the foundation for the remarkable progress of elementary education in new Japan.

The word "tera" means Buddhist temple and "koya" children's house, so the tera-koya was a school for children established by a Buddhist temple. It was originated many years before the time of the Tokugawa Shogunate by Buddhist monks. Side by side with Governmental schools for the samurai class, tera-koya education began to spread in the Yedo period among the common folks in business and farm quarters. It gradually ceased to be entirely in the hands of the monks, and assumed a form and nature quite different from the original.

The school-house was no longer in or attached to a temple; teaching was not restricted to the monks; the teacher might be a samurai, monk, doctor or Shinto priest. "Tera-koya" became merely a general name, and the founders of tera-koya schools chose any name they liked for their own. The size of the schools was diverse; the largest one accommodating as many as two or three hundred pupils. There was rarely more than one teacher, but in the larger schools there might be an assistant. The age of the pupils ranged from 6 to 10 years. It was co-education, although the sexes sat apart. The courses of study were commonly penmanship, Japanese literature, and the use of the abacus, with such optional subjects as Chinese literature, poem composition, sewing, flower-arrangement or tea ceremonies. Many textbooks on moral precepts and letter writing were published and used in these schools. These schools were usually kept up largely out of the pocket of the school master himself, for his work was entirely voluntary, inspired by pure devotion to service, for which he gained the honor and respect of community. According to the report of the

Ministry of Education, there were 15,862 *tera-koya* in Japan at the beginning of the Meiji Era, or just before the establishment of the new elementary school system.

It must be remembered also that technical schools had made considerable progress in old Japan. Medical schools in particular were established in the Taiho Era, and medical science made steady progress toward the middle of the Yedo period. The Tokugawa Shogunate established a medical school in 1765, and local clan lords followed this example. There were several private ones well known to the people. But these taught the Chinese method of the science, and the "materia medica" was almost entirely of herbs and animal matter. The modern or Western medicine and its system and practice were introduced through Dutchmen at the end of the Yedo period, so we may say that medical science was the earliest of all the sciences that were learned by the Japanese people from the West-erners.

Educational Administration

The present educational system of Japan dates from 1872 the 5th year of Meiji, when elementary education was made compulsory. The new system was established, in the main, after the examples of the French system, and the entire country was divided into 7 university districts, each of them consisting of 32 middle school districts and each of which was again divided into 210 primary school districts, or one primary school for 600 of population. The national educational principles are stated in the Imperial Rescript on Education issued on Oct. 30, 1890. This world-renowned rescript was published to lay down leading ideas and principles for the guidance of the Japanese, and it reads as follows:

"Know ye, Our Subjects!

Our Imperial Ancestors have founded Our Empire on a basis broad and everlasting and have deeply and firmly implanted virtue; Our subjects, ever united in loyalty and filial piety, have from generation to generation illustrated the beauty thereof. This is the glory of the fundamental character of Our Empire, and herein also lies the source of Our education. Ye,

Our subjects, be filial to your parents, affectionate to your brothers and sisters; as husbands and wives be harmonious, as friends true; bear yourselves in modesty and moderation; extend your benevolence to all; pursue learning and cultivate arts, and thereby develop your intellectual faculties and perfect your moral powers; furthermore, advance the public good and promote common interests; always respect the Constitution and observe the laws; should any emergency arise, offer yourselves courageously to the State; and thus guard and maintain the prosperity of Our Imperial Throne, coeval with heaven and earth. So shall ye not only be Our good and faithful subjects, but render illustrious the best traditions of your forefathers.

The way here set forth is indeed the teaching bequeathed by Our Imperial Ancestors, to be observed alike by Their Descendants and subjects, infallible for all ages and true in all places. It is Our wish to lay it to heart in all reverence, in common with you, Our subjects, that we may all thus attain to the same virtue."

The 30th day of the 10th month of the 23rd year of Meiji.

(Imperial Sign Manual)

(Imperial Seal)

All school education in Japan is supervised by the State, being partly entrusted to local public bodies such as the prefectural councils, towns and villages.

Private individuals are also allowed to found schools and universities, although here too the Government does not give much latitude of method or scope, and the uniformity of school education in all parts of the Empire has worked well in bringing the degree of advancement in modern ways and thought to almost the same level throughout the land, and greatly strengthening the national spirit and unity of the people.

The points entrusted to local public bodies are chiefly financial matters, pertaining to the establishment and maintenance of schools, some of which are obligatory while some are left to the discretion of local bodies. The obligatory matters are the establishment by Hokkaido and the prefectures of normal schools, middle schools for boys and

girls, schools for the blind and for the deaf-and-dumb, technical schools by order of the Minister of Education, and that of ordinary elementary schools by cities, towns and villages. Municipalities may not establish higher normal schools, and Hokkaido and the prefectures alone are authorized to establish universities, higher schools and normal schools.

The main principles regarding the nature and objects of schools, their scholastic terms, curricula, organization, entrance qualifications, qualifications for the teachers, equipment, means of meeting the expenditure, and tuition fees are prescribed by Imperial Ordinances. The establishment of schools by public bodies or private individuals must be approved by the local supervising authorities, which also exercise control to a certain extent over their methods of education and finances.

Religion is, on principle, excluded from the educational agenda of schools. In all schools established by the Government and local public bodies, and in private schools whose curricula are regulated by laws and ordinances, it is forbidden to give religious instruction or to hold religious ceremonies either in or out of the regular curricula.

Education in the colonies comes under the control of the colonial governments, and the military schools belong to the Army and the Navy Ministries, while there are some technical schools which come under the supervision of other ministries. But with these exceptions, it may be safely said that the Minister of Education has charge of all matters relating not only to school education, but also to what may be termed social education, such as art, science, literature and religion. He is assisted by the parliamentary councillor in the conduct of political affairs and in matters which are connected with the business of the Imperial Diet. The vice-minister assists him in the business part of the Ministry.

Of the affairs within the jurisdiction of the Ministry, those that are related to education, art, science, and literature are distributed respectively among the Bureaux of Higher Education, General Education, Technical Education, Social Education, School Books, and Student Control, and these pertaining to religion are under the direction of the Bureau of Religion. Those affairs which

do not properly belong to any one of these bureaux are dealt with in the Minister's Secretariat. In addition there are school superintendents, who inspect schools and directly supervise educational affairs; supervisors of social education who direct and supervise social educational affairs; superintendents of compilation who compile and examine textbooks; and supervisors of school hygiene who look after the sanitary conditions of schools. Various advisory committees with prominent men in and out of office as members are instituted to help the Minister of Education in matters of wider scope.

The Minister of Education is authorized to direct and supervise the Superintendent of the Metropolitan Police and the local governors in matters under his control.

The prefectural governors direct and supervise their subordinate officials and exercise supervision over the public and private schools, kindergartens and libraries within their jurisdictions. There is a Division of Educational Affairs in each prefecture which has control of matters relating to education. School inspectors and sub-inspectors in it inspect schools and conduct educational business directly.

The mayors of cities and towns and the heads of villages deal with affairs regarding elementary schools and exercise control over them. The mayors of cities, moreover, have authority to make recommendations to prefectural governors in the appointment of the principals and teachers of elementary schools. The municipalities have school boards to look after elementary schools.

School Education

As is shown in the following tables, Japan is well provided with schools, ranging from kindergartens up to universities. Almost all the elementary schools are controlled by public bodies.

Conditions are different when we come to secondary education, for which there exist a considerable number of private schools, and in the case of schools of the highest grade the private establishments quite outrange in number those under official control.

Only 18 out of the 45 existing universities were built by the Government, 2 by public bodies and the rest by private bodies.

The total number of schools in Japan

proper and their enrolment in the last five years, 1934-1938, is shown below:

Year	Schools	Students
1934	45,903	13,760,200
1935	46,138	14,035,823
1936	47,750	14,949,792
1937	48,216	15,242,333
1938	48,637	15,638,780

Classified according to types, the number of schools in Japan proper on March 1, 1938, with the number of students enrolled, was as follows:

	Schools	Students
Elementary Schools	25,906	11,792,738
Middle Schools	563	364,486
Girls' High Schools	996	454,423
Business Schools	1,355	477,596
Young Men's Schools	17,337	2,041,321
Higher Schools	32	17,017
Universities	45	72,968
Colleges	118	72,088
Higher Trade and Industrial Colleges	61	27,613
Normal Schools	101	30,783
Higher Normal Schools	2	1,805
Higher Normal Schools for Women	2	880
Special Institutes for the Training of Teachers	1	58
Institutes for the Training of Business School Teachers	3	232
Institutes for the Training of Young Men's School Teachers	49	1,596
Schools for the Blind	78	5,160
Schools for the Deaf and Dumb	62	5,870
Miscellaneous Schools	1,926	272,140
Total	48,637	15,638,780
Kindergartens	2,001	162,027

Elementary Education

Elementary education in Japan is compulsory and has attained to its present high level of excellence through many

improvements since the promulgation of the School Ordinance in 1872. In the Imperial Ordinance relating to Elementary Schools the object of elementary education is defined as follows:

"Elementary schools are designed to give children the rudiments of moral education specially adapted to make of them good members of the community, together with such general knowledge and skill as are necessary for the practical duties of life, due attention being paid to their bodily development."

According to the system of compulsory education all children from 6 to 14 years of age are called school-age children, and those who exercise parental authority over them, or their legal guardians, must send them either to the ordinary elementary schools established by the cities, towns or villages until they complete the required course of study, or to schools established by the Government, prefectures or by private individuals, recognized as equal to the ordinary ones above mentioned. The law is not enforced when a child is unfit for study owing to physical or mental deficiency or cannot be sent to school by reason of extreme poverty. There is a provision which requires the employers of school-age children to see that the work imposed does not interfere with their going to school.

The responsibility of establishing ordinary elementary schools is placed upon cities, towns and villages. But special provisions permit the State Treasury to bear part of the expense, and the diffusion of elementary school education in Japan proper is all but ideal, the number of the school-age children attending schools maintaining the rate of 99.59 per cent for the past five years.

The full figures are as follows:

These figures represent the condition existing on March 31 of the respective years.

RATE OF ATTENDANCE

Year	School-age Children	Children Attending Schools	Children not Attending Schools	Percentage of Children Attending Schools
1934	11,024,532	10,978,718	45,814	99.58
1935	11,150,824	11,103,920	46,904	99.58
1936	11,358,094	11,311,266	46,828	99.59
1937	11,482,451	11,434,983	47,468	99.59
1938	11,671,876	11,624,979	46,897	99.59

Elementary schools are divided into two grades, namely, ordinary or lower and higher. The former are for the beginners and their course extends over six years. The latter are for those who have completed the lower course, and their courses are of two or three years' duration. The subjects taught are morals, Japanese language, arithmetic, Japanese history, geography, science, drawing, singing, sewing (for girls only) and gymnastics. In the higher courses, either one or more subjects out of handicraft, agriculture, industry, commerce and domestic science (for girls only), are added, and if local circumstances make it advisable, handicraft in ordinary elementary schools and foreign languages and other useful subjects in higher elementary schools may

also be taught.

An elementary school may comprise both the ordinary and the higher elementary school courses and may equip itself with a supplementary course of not more than two years.

Under the present system of compulsory education the father's responsibility ends when his child has graduated from the lower elementary school. But the ordinary elementary education of children is not sufficient for the existing conditions of society, and many cities, towns and villages establish higher elementary schools either independently or in connection with ordinary ones.

The following table will give a general idea of the conditions of elementary schools as they were in 1938:

ELEMENTARY SCHOOLS IN 1938

Schools	Governmental	Public	Private	Total
Ordinary	—	6,880	79	6,959
Ordinary and Higher	4	18,713	21	18,738
Higher	—	208	1	209
Total	4	25,801	101	25,906
Classes				
Ordinary and supplementary	55	201,641	684	202,380
Higher and supplementary	7	39,577	45	39,629
Total	62	241,218	729	242,009
Teachers	99	267,663	923	268,685
Pupils	2,359	11,762,065	28,314	11,792,738
Graduates	444	2,394,434	4,969	2,399,847
Entrants	518	2,722,750	5,523	2,728,797
Daily Attendance				
Ordinary	2,038	9,703,039	25,506	9,730,583
Higher	211	1,692,332	1,492	1,694,035
Total	2,249	11,395,371	26,998	11,424,618
Percentage of Daily Attendance				
Ordinary	95.14	96.84	96.43	96.84
Higher	97.23	96.25	97.64	96.25
Average	95.33	96.75	96.50	96.75

Teachers There are more male teachers than female in the Japanese elementary schools, and they are classified according to their education and special abilities, as (1) elementary school teachers (2) lower elementary school teachers,

(3) teachers on special subjects, (4) assistant teachers, and (5) substitute teachers. The teachers belonging to the first two classes are regular teachers properly qualified for the elementary education of children.

ELEMENTARY SCHOOL TEACHERS CLASSIFIED

(March 1, 1938)

Ordinary Elementary Schools	Male	Female	Total
Regular teachers	121,385	59,299	180,684
Special teachers	3,388	7,340	10,728
Assistant teachers	3,330	2,119	5,449

	Male	Female	Total
Ordinary Elementary Schools			
Substitute teachers	12,891	13,327	26,218
Total	140,994	82,085	223,079
Higher Elementary Schools			
Regular teachers	36,836	3,780	40,616
Special teachers	1,751	1,325	3,076
Assistant teachers	71	11	82
Substitute teachers	1,440	392	1,832
Total	40,098	5,508	45,606

Kokumin Gakko Beginning April 1, 1941

Reform in Elementary Education

The term of compulsory general education in this country was fixed at 4 years in 1886, then the period was extended to 6 years in 1908. And now after 32 years, the term is extended to 8 years beginning April 1941. The ground was prepared for this by the establishment of the young men's school system in 1935, which provides for a five-year course, carried on after completion of the six-year elementary course. It has served to stimulate the extension of compulsory general education by two years, and sets forth an ideal of an eventual eleven-year general education course.

The guiding principle of the educational reforms consists in imparting the characteristics of Japanese society to compulsory general education. It seeks to make national education in keeping with the actual conditions of society, which is decidedly an industrial one, with greater emphasis on vocational training and proper coordination between the different subjects of study.

These aims of developing the Japanese character and vocational extension are embodied in the curriculum of the Kokumin Gakko, or national school, with special attention paid to the following points:

(1) Not only will knowledge and skill be imparted through the curriculum, but the Kodo (principles of imperial benevolent rule) will be inculcated so as to foster national characteristics.

(2) With a view to effecting basic national training in accordance with the trend of the times and the new theory, the curriculum of the national school is divided into the five courses of civics (kokuminika), science and mathematics, physical training, art and busi-

ness.

(3) Basic national training will be given so as to qualify the pupils as future useful members of the Empire, by establishing close connections among the five courses themselves and also by coordinating the five courses with the teaching of the Kodo which is the nucleus of the system.

(4) All material for the five courses will be systematized so as to give full play to the characteristics of each course, at the same time maintaining close connections among the five courses.

(5) The curriculum for eight years will be systematized so as to establish unification and coordination.

(6) The aims of compulsory common education will be realized by paying close attention to selection and arrangement of subjects taught with the addition of necessary items as required.

Article 1 of the National School Regulations declares that the national school is aimed at imparting a type of general education indispensable to the nation and at effecting a basic training for the Emperor's subjects along the lines of the Kodo. Detailed regulations governing the enforcement of the National School are translated and condensed as follows, so as to give a précis of the Government's regulations:

1. Children are educated at the national school in accordance with Article I of the National School Regulations, by observing the following points:

(a) Training in the Kodo shall dominate all educational activities, by fostering the national spirit and strengthening faith in the national polity.

(b) An outline of the Japanese culture shall be impressed on the pupils with emphasis on salient features. Also the general situation of East Asia in particular and the world in general shall be taught them so as to make them conscious of the position of the Empire.

(c) All courses and subjects of study shall be so handled as to give full play to their characteristics by maintaining close harmony among them, but all shall converge toward the aim of providing a basic national training.

(d) Mind and body shall be trained as a whole with a view to balanced development of national characteristics.

(e) Festivals, ritual, school programs, work, athletics, hygiene, and other educational measures outside the school curriculum shall be incorporated into the curriculum in a suitable manner, so as fully to realize the real aim of common education.

(f) Education must be concrete and practical, in keeping with national life. Greater attention must be given to this point in the higher national school, which is expected to give proper guidance to the pupils in entering vocational life.

(g) Teaching material shall be carefully selected for efficient instruction, while pupils shall be induced to take a voluntary interest in their studies, by means of proper guidance and by cultivating a habit of voluntary study.

(h) Proper training shall be given the pupils, by paying attention to their growth, physical and mental, as well as to the special character, individuality and surroundings of boys and girls.

2. The civic, or national course (kokuminika) is divided into morals, Japanese language, geography and history. The mathematics and science course are divided into arithmetic and science. The physical training course is divided into gymnastics and military arts. The art course is divided into music, penmanship, drawing and manual work, while for girls housekeeping and needlework are added to the course. The business course is divided into agriculture, technical industry, com-

merce and fisheries. Other subjects may be added to the curriculum of the higher national school in consideration of the actual local conditions, subject to the approval of the prefectural governor. Such additional subjects may be made optional.

3. The national, or civic course is aimed at clarifying the essence of national polity, fostering the national spirit and making the pupils conscious of their duties for the Empire, by improving their knowledge of the morals, language, history and geography of Japan. The pupils shall be induced to appreciate the happiness of being born in the Empire, be trained to live in piety and in devoted service to the public. Pupils shall be made to understand that the national spirit is based on the aspiration of the Empire, which is to go on developing forever. Further they shall be taught not only to understand that the history and geography of Japan have fostered a fine national character, but to strive to create and develop the unique culture of Japan.

The general situation of East Asia in particular and the world in general shall be laid before the pupils in an effort to qualify them as future members of a great nation. The national, or civic course shall be taught the pupils in close coordination with the other courses, by means of reference to politics, economics, national defense and maritime affairs.

4. The science and mathematics course is intended to foster a rational creative spirit, to prepare ground for contributions to the development of the State, by making correct observation of natural phenomena and dealing with them properly in the course of daily life. Pupils shall be made to understand that scientific progress offers substantial contribution to the development of the State, and also that they are charged to create new forms of culture in furthering Japan's progress. The pupils shall be trained to study mathematics and the laws of nature. A faculty for analytical and logical observation shall be fostered, with emphasis on a comprehensive and intuitive grasp of the subject under observation. Efforts are made for scientific training of the pupils, by having them undertake accurate, thorough experiments, tests, surveys, drawings and building and

other work.

Common sense regarding national defense shall be cultivated, by drawing attention to the fact that national defense depends a great deal on scientific progress.

5. The physical course is aimed at co-ordinated training of both body and mind as a whole for the purpose of building up health and cultivating the spirit of fortitude, manliness and generosity. Mass training also is encouraged to enhance the national spirit, and devotion to the public cause. Pupils shall be induced to realize that strong and sturdy physique and vigorous spirit, are essential for national defense.

No effort is spared to make discipline assert itself in daily life in the form of good manners, posture and other matters, while proper guidance is given the pupils in consideration for their physical and mental development as well as for the special character of boys and girls. Hygienic care is given the pupils in accordance with the result of their medical examination.

6. Military arts in the physical training course are cultivated for the purpose of training both body and mind and also of fostering the samurai spirit, by making the pupils acquainted with the elements of those arts. In the elementary national school the boys are trained in kendo (fencing) and judo, while the girls trained in the use of the naginata (a kind of halberd).

7. The art course is aimed at cultivating artistic skill indispensable to the nation. Even in this spiritual training must prevail for the purpose of cultivating a sincere attitude. The essence of artistic skill, peculiar to the people, is introduced to the pupils for the purpose of cultivating their creative faculty.

The teaching material shall be national, selected with special attention to local conditions. Application of artistic skill to daily life is encouraged; mass work is imposed on the pupils from time to time, though a proper develop-

ment of individuality must not be lost sight of. The pupils is taught manners and posture, with proper guidance in the use of implements.

8. The business and technical course is to give the pupils common information and skill in industries, cultivating their habit of labor and deepening their understanding of vocations in general. The pupils is induced to realize the national need of industries, thus preparing themselves to make contributions to the development of the State. The course may include agriculture, technical industry, commerce and fisheries, in accordance with local needs.

Wherever necessary a foreign language, English or Chinese, may be included in the business and technical course.

Actual conditions and the special character of industries in this country shall be made clear to the pupils, together with the great contributions made by industry to the prosperity of the country. The pupils are encouraged to render service to the State by engaging in industrial work. Special attention shall be drawn to the close relations between national defense and industry. In connection with morals in the national, or civic, course, it is taught that a vocation forms a channel through which service can be rendered to the State. Proper guidance is also given in selecting future vocational work for the pupils.

9. The curriculum of the elementary national school is based on Schedule No. 1 and that of the higher national school on Schedule No. 2. The total number of weekly lesson hours in the first term of the first year of the national school may be extended to 18, in which case weekly lesson hours of each course and subjects of study shall be decided by the school master.

In order to make clearer what has been stated in the above, the curriculum of the national school system is attached in the following pages. Every lesson hour consists of 40 minutes and the lunch recess follows the fourth lesson hour.

Schedule No. 1. (Elementary course)

Curriculum subjects	First year		Second year		Third year	
	Lesson hours	Contents	Lesson hours	Contents	Lesson hours	Contents
National, or civic, course	10	National morals Reading, writing, speaking	11	" "	2	Reading, writing, speaking
Science and mathematics course	5	General arithmetic, Natural science	5	" "	5	" "
Physical training course	4	Gymnastics, drill, play, Sports & hygienics	5	" "	4	" "
Art course	2	Singing, appreciation, Observation, representation and appreciation of objects, handicraft	2	" "	2	" "
Total weekly lesson hours	21		23		26	
Curriculum subjects	Fourth year		Fifth year		Sixth year	
	Lesson hours	Contents	Lesson hours	Contents	Lesson hours	Contents
National, or civic, course	8	Local history and geography	7	History (general) Geography (general)	7	" "
Science & mathematical course	5	General science	5	" "	5	" "
Physical training course	4	" "	2	Fundamentals of military arts	2	" "
Art course	2	" "	2	" "	2	" "
	2	Needlework (fundamental)	1	" "	1	" "
	4 (boys) 2 (girls)		4 (boys) 2 (girls)		4 (boys) 2 (girls)	
Total weekly lesson hours	30		31		32	

Schedule No. 2 (Higher course)

Curriculum	Subjects	First year		Second year	
		Lesson hours	Contents	Lesson hours	Contents
National, or civic, course	Morals	2	National morals	2	"
	Japanese language	4	Reading & writing	4	"
	Japanese history	2	Outline of Japanese history	2	"
	Geography	2	Outline of geography	2	"
Business & technical course	Agriculture	5 (boys)	Outline of one or several of the subjects and practice	5	"
	Technical industry			(boys)	
	Commerce	2 (girls)	2 (girls)	"	
Science & mathematics course	Fishery				
	Arithmetic	3	General arithmetic	3	"
Physical training course	Science	2	General science	2	"
	Gymnastics	6 (boys)	Gymnastics, drills, play sports & hygienics	6 (boys)	"
	Military arts	5 (girls)	Fundamentals of military arts	4 (girls)	"
	Music	1	Singing, appreciation, & basic exercise	1	"
Art course	Penmanship	1	<i>Kana, kaisbo, gyosbo, sosbo</i> and appreciation	1	"
	Drawing Work	2	Observation, representation and appreciation of objects	2	"
	Housekeeping (girls)		Wood and metal works, gardening & handicraft (girls)		
	Needlework (girls)	5	General housekeeping	5	"
	General needlework				
	Lesson hours	30		30	
	Extra hours	2-4		2-4	
	Total weekly lesson hours	32-34		32-34	

Textbooks The task set before the Bureau of Books, Ministry of Education, to decide what textbooks to prepare for this epoch-making reform in national education was a difficult one. In order to embody the spirit of the new system

in schoolbooks, the authorities, since 1939, had studied the report of the Educational Council and other data, while investigating the actual conditions of education. In the spring of 1940 they sought the opinions of the

authorities on pedagogy, critics of educational affairs and leading educationalists; and after careful deliberation formulated general principles on which to carry out the work of compilation.

The new schoolbooks are so compiled as to realize the spirit and ideals embodied in the Imperial Ordinance Pertaining to the National School Law. What is deemed necessary for the basic training of the rising generation as Japanese subjects, in accordance with the principles on which the Japanese Empire was founded, has been selected as material for the textbooks. And they are so arranged as to be in keeping with the national life and the mental and physical development of the pupils.

The national school admits children of six years of age and its course of study extends over eight years. Based upon psychological theories and practical experience in education, the eight years have been divided into four periods, i.e. the first, second and third periods covering respectively the first and second years, the third year, and the fourth, fifth and sixth years of the elementary course, and the fourth period extending over the two years' higher course.

The new textbooks prepared in April 1941 are those for the first period, i.e. for the first and second years of the elementary course. As a matter of fact, schoolbooks for the lowest classes are the most difficult to compile, because the pupils are six and seven years old and little better than kindergarten children. So the books require to be prepared with elaborate plans and meticulous care. The textbooks for the first period, therefore, ought to be extension of picture-books, such as books with pictures of trams and railway trains. The new schoolbooks are accordingly titled in terms familiar to the pupils, for instance, Good Boys and Girls, How to Read, Book of Figures, Book of Pictures, Book of Songs and Copy-books. Their contents are also suited to the life and sentiments of the young boys and girls in this period of growth.

But even in the life of those innocent little ones there is some element of gravity and piety. On Tenchosetsu (the Emperor's Birthday), Meijisetsu (Anniversary of the Emperor Meiji's Birthday), New Year's Day and Kigensetsu (Empire Day) they attend the ceremony

held at their school, when they pay respects to the Imperial Portraits and sing the national anthem. At home they lead a moral life in their way, performing their filial duties to their parents and grandparents. There are also the family Buddhist altar, the family Shinto shrine, and the Shinto shrine of their birthplaces, institutions to which they are taken by their parents to offer prayers. The environment in which those little ones live is full of things which contribute to the fostering in them of the concept of national polity and the spirit of piety and of reverence toward their ancestors.

Children's songs, such as "Evening Burning, Little Burning" and "O Full Moon" are the expression of praise to their beautiful land, and their search for cicadas and grasshoppers may be regarded as the beginning of their interest in science. Playing marbles and shop develop in the children mathematical and economic ideas. Drawing, paper-work and toy-making all help to foster creativeness and inventiveness in the child's mind. Those brought up in the mountainous districts have a yearning after the sea lying beyond the hills, while the children born and bred by the sea grow up to be the defense of the island country. Since the outbreak of the current hostilities, they have seen their fathers, uncles and brothers leave for the front, and have heard from those relatives about the battle-fields over the sea. And not a few of the children become ambitious to go over to the Continent. They play soldiers, address soldiers in the street, take radio callisthenics, coax their parents to buy them toy tanks, pore over picture-books of warships, are keenly interested in the aeroplane, and fly model planes. Schoolbooks for the first period are intended to draw attention to their lives which are occupied with such innocent games and lead them educationally so as to develop their spiritual lives. They embody, so to speak, the spirit of what we call the highly organized national defense structure.

By the use of the Book of Songs the development of the sense of sound is intended, and the Book of Pictures aims at training children in the sense of color. Standard colors cannot be printed even by the advanced art of printing today. So the Book of Pictures

has beautiful, hand-dyed colored paper containing nine to thirteen colors. Thus the textbooks for the national school are compiled with well-selected and systematized materials necessary for giving children basic training as subjects of the Japanese Empire. Even the books for the first period form an integral part of this system of textbooks.

These schoolbooks are printed on a vast scale with most advanced technical skill. In the present school year, beginning with April 1, 1941, about 60 different textbooks for the first and second years of the elementary course, including teachers' manuals and maps, have been completed. Altogether about 53,000,000 copies of them have been supplied to the pupils and teachers throughout the country.

Secondary Education

For the secondary grades there are middle schools for boys, girls' high schools, business schools and Young Men's schools.

Middle Schools The course of the middle school extends over five years, and its object is to give boys such a higher general education as will fit them to be useful members of society after their graduation. The subjects taught are morals, civics, the Japanese language and Chinese classics, history, both Japanese and foreign, geography, a foreign language (either one of English, German, French or Chinese), mathematics, science, technical studies, drawing, music, practical work (carpentering, gardening, etc) and gymnastics.

From the fourth year upwards, the subjects are selected and arranged into two groups, the pupils making choice between the two. Under special circumstances, however, the Minister of Education may authorize a school in which either of the two groups may be

dispensed with. This dual system of curriculum is of benefit on the one hand to the pupils who wish to take up employment immediately upon graduation, and on the other to those who wish to advance to collegiate schools.

To the regular course a supplementary course of one year or less may be added, and, if local circumstances require, a preparatory course of two years may also be provided. A boy who desires to enter a middle school must complete either its preparatory course or the full course of an ordinary elementary school. Those who are twelve or more years of age and in possession of adequate scholastic attainments may be admitted upon examination, the method of which was improved from written examination on subjects of study to the calculation of the fitness of children to the secondary education by examining the report of the elementary school on each boy or girl, testing physical conditions, and making oral examinations on character, since 1940. Those who have completed the fifth year (the course of the ordinary elementary school ends with the sixth year as mentioned above) of an ordinary elementary school and are physically well developed and have shown excellent scholarship are allowed to apply for the entrance examination, even though under twelve years of age; this is to give a chance to specially gifted boys.

The following are the figures for middle schools and their pupils on March 1 of each year:

Year	Schools	Pupils
1934	554	327,201
1935	555	330,992
1936	557	340,057
1937	559	352,320
1938	563	364,486

A general idea of the condition of the middle schools in 1938 may be obtained by the following table:

	Governmental	Public	Private	Total
Schools	2	441	120	563
Classes, regular course	25	6,340	1,520	7,885
Number of boys in one class	38.44	46.05	46.71	46.15
Teachers, licensed	62	10,102	2,514	12,678
	Female	Female 2	Female 2	Female 4
" non-licensed	—	949	612	1,561
	Female	Female 7	Female 2	Female 9

Total	62	11,060	3,130	14,252
Pupils, regular course	961	291,942	71,006	363,909
Preparatory	—	—	15	15
Pupils, supplementary course	—	489	73	562
Total	961	292,431	71,094	364,486
Graduates, regular course	164	47,762	10,699	58,625
Preparatory	—	—	13	13
supplementary course	—	1,138	73	1,211
Total	164	48,900	10,785	59,849
Applicants, regular course	1,284	109,837	40,772	151,893
supplementary course	—	3,497	174	3,671
Total	1,284	113,334	40,946	155,564
Admitted, regular course	205	66,973	17,694	84,872
Admitted, supplementary course	—	2,244	137	2,381
Total	205	69,217	17,831	87,253
Left school, regular course	20	18,424	7,652	25,496

Girls' High Schools The system of high schools for girls is made flexible to suit practical requirements. A girl who has completed elementary school or has equivalent scholastic attainments and is twelve years or more of age may be admitted to a girls' high school. The course of the girls' high school extends over four or five years, and those schools whose entrance requirement is the completion of the higher elementary school or the possession of the same or higher scholastic attainments are allowed to shorten their course to three years. There is another kind of girls' high school which is called Girls' Domestic High School, where domestic science is the main course of study, and its regular course extends over two to four years. Girls who wish to take only one part of the course are allowed to do so on application. A supplementary course of two years or less may be provided for the benefit of those who wish to continue their study after completing the regular course, and a post-graduate course or a higher course of two or three years for the purpose of giving higher education. In the cases of the higher course, higher qualifications are required of the teachers and its standard is brought up almost to that of the higher school for boys.

The subjects taught in a girls' high school are the same as those taught in the middle schools, but with the addition of domestic science and sewing, the required hours of study being from 28 to 29 a week. In the case of the Girls' Domestic High School, technical study added and the hours for domestic science

and sewing are double those of the ordinary high school, the time allowed for other subjects being shortened, and foreign languages omitted altogether. Under special circumstances the foreign language, drawing and music may be omitted, and if local circumstances require, pedagogics, manual arts, technical studies and other useful subjects may be taught in addition to the normal curriculum. In cases the total weekly hours may be increased to a little over 30. The curriculum of a domestic course of three years, the entrance requirement of which is the completion of the first year of the higher elementary school, is to be suitably drawn up on the basis of that of a domestic course of two years, the entrance requirement of which is the completion of the higher elementary school, and be submitted to the Minister of Education for approval.

The progress of female education is phenomenal in modern Japan and girls' high schools have taken very marked strides in recent years both in number and quality. At the end of March 1938, there were 996 girls' high schools in Japan proper, many of them being provided with, or contemplating the provision of, a post-graduate course or a higher course.

The number of schools and girl students on March 1 of each year was as follows:

Year	Schools	Girls
1934	975	371,807
1935	970	388,935
1936	974	412,126
1937	985	432,553
1938	996	454,423

GIRLS' HIGH SCHOOLS IN 1938

Schools:	Governmental	Public	Private	Total
High School	2	587	229	818
Domestic H.S.	—	160	18	178
Total	2	747	247	996
Classes:				
Regular course	47.04	5,803	2,512	5,339
In a class, average	—	50.28	49.05	49.90
Post graduate	—	23	—	23
In a class, average	—	31.13	—	31.13
Domestic High School	—	577	115	692
In a class, average	22	43.97	43.46	43.85
Teachers, licensed:				
High School, regular course, male	34	5,665	2,064	7,751
female	—	4,068	2,302	6,404
Post graduate, male	—	38	—	38
female	—	1	—	1
Domestic high school, male	—	316	100	416
female	—	523	81	604
Teachers, unlicensed:				
High School, regular course, male	—	285	463	748
female	—	240	461	701
Post graduate, male	—	3	—	3
female	—	9	—	9
Domestic High School, male	—	74	49	123
female	—	52	37	89
Total, male	22	6,381	2,676	9,079
female	34	4,893	2,881	7,808
Total	56	11,274	5,557	16,887
Pupils	1,290	323,893	129,240	454,423
Graduates	292	77,106	26,276	103,674
Applicants	1,104	135,836	64,737	201,677
Admitted	314	91,761	32,382	124,457
Left school in the school year	20	12,129	6,263	18,412

Business Schools Business schools of secondary grade are established for the purpose of giving young people the practical knowledge and skill necessary in various vocations, and much is left to the discretion of the founders as to the systems of schools in order to suit the special needs of different industries, trades and localities. The courses may extend from two to five years according to the nature of the school. A period of not longer than one year may be added to the maximum prescribed course. Further provisions are allowed to meet the needs of those who desire to take only a part of the curriculum, for those who, after completing the prescribed course, still desire to remain for further study, and for those who wish after completing the course of a middle school or girls' high school, to enter a business school with the object of receiving business education; and lastly for those who wish to receive instruction in a simple way for only a

short period.

On March 1, 1938 there were 1,355 business schools. The figures for the years 1934-38 are given below:

Year	Schools	Pupils
1934	1,041	316,846
1935	1,125	367,026
1936	1,250	396,968
1937	1,301	433,437
1938	1,355	477,596

Business schools are divided into two classes, A and B. Those schools which belong to A class admit boys and girls who have completed the course of the ordinary elementary school, while those which belong to B class admit those who have completed the course of the higher elementary school. And they are of six kinds, namely, Technical, Agricultural, Fisheries, Commercial, Navigation and Practical. Figures relating to these business schools in 1938 are given below.

BUSINESS SCHOOLS (A)

	Schools	Teachers	Pupils	Graduates	Applicants	Admitted	Left School
Technical	121	2,774	49,757	11,140	48,343	15,773	2,210
Agricultural	264	3,121	61,093	17,551	28,614	21,271	2,833
Commercial	341	7,972	211,588	35,989	109,721	55,193	15,652
Navigation	8	126	1,733	489	821	514	85
Fisheries	15	161	2,602	576	1,327	718	135
Practical	291	3,769	73,792	25,478	37,996	29,760	3,894
Total	1,040	17,923	400,565	91,223	226,822	123,229	24,809

BUSINESS SCHOOLS (B)

	Schools	Teachers	Pupils	Graduates	Applicants	Admitted	Left School
Technical	43	487	12,487	4,401	18,610	8,545	1,576
Agricultural	107	919	22,220	7,790	9,545	8,352	1,357
Commercial	90	940	25,360	9,218	17,995	12,565	1,852
Navigation	1	12	133	88	238	227	79
Fisheries	5	18	356	114	269	175	55
Practical	69	578	16,475	10,064	16,045	14,318	2,155
Total	315	2,954	77,031	31,674	62,602	44,182	7,074

Of these schools, 14 technical, 12 agricultural, 153 commercial, and 149 practical schools were under private management.

Young Men's School On April 1, 1935, the Young Men's School was established by the amalgamation of the Young Men's Training Institute and the Business Continuation School. The attendance became compulsory from April 1939.

The purpose of the new institution is to elevate young people's attainment as citizens of Japan by training mind and body, by cultivating moral nature and by educating in knowledge and ability indispensable to their profession and practical life.

The course of study of Young Men's School is graded into three, common, regular and post graduate. The common course extends over two years, the regular course five years for boys and three years for girls (four years for boys and two years for girls may be allowed according to local conditions), and the post graduate course over one year. Graduates of the lower course of elementary school may enter the common course of Young Men's School; those who finished the common course may be advanced to the regular course, while the graduates of the high course of elementary school have the same privilege; and graduates of the regular course or those who are in possession of an adequate scholastic attainment may

take the post graduate course.

Subjects of study are, in the common course, morals, civics, some of subjects common to middle schools, agricultural subjects and gymnastics, with additional studies on housekeeping and sewing for girls only; in the regular course the same subjects are given in a more advanced grade; and in the post graduate course, morals, civics and certain studies selected from the subjects of the regular course. Special course may be added. Pupils are free of charge as a rule.

The number of Young Men's Schools and that of their pupils for the years 1934-1938 were as follows:

Year	Schools	Pupils
1934	15,140	1,271,530
1935	15,306	1,281,814
1936	16,708	1,902,876
1937	17,043	1,964,599
1938	17,337	2,041,321

Higher Education

The institutions for higher education are higher schools, universities, colleges, and higher trade and industrial colleges.

Higher normal schools, institutions for training teachers of higher education, post-graduate or supplementary courses in secondary educational institutions and higher grade classes of the special educational institutions are mentioned under other headings, though they might be included here with the other higher educational organs.

The number of schools under this