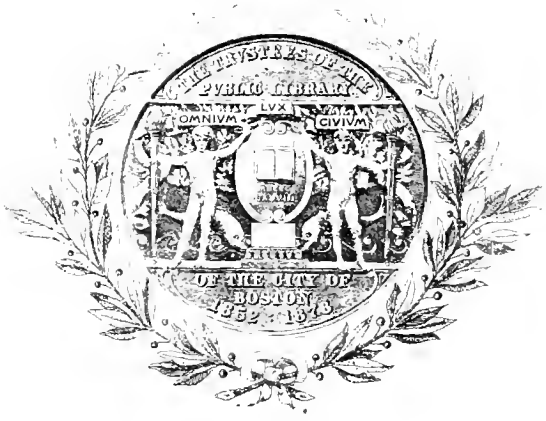

NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

E V I D E N C E S T U D Y

NO. 12

OF

THE FABRICATED METAL PRODUCTS MANUFACTURING AND
METAL FINISHING AND METAL COATING INDUSTRY

Prepared by

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JULY, 1935

PRELIMINARY DRAFT

(NOT FOR RELEASE: FOR USE IN DIVISION ONLY)

THE EVIDENCE STUDY SERIES

The EVIDENCE STUDIES were originally planned as a means of gathering evidence bearing upon various legal issues which arose under the National Industrial Recovery Act.

These studies have value quite aside from the use for which they were originally intended. Accordingly, they are now made available for confidential use within the Division of Review, and for inclusion in Code Histories.

The full list of the Evidence Studies is as follows:

1. Automobile Manufacturing Ind.
2. Boot and Shoe Mfg. Ind.
3. Bottled Soft Drink Ind.
4. Builders' Supplies Ind.
5. Chemical Mfg. Ind.
6. Cigar Mfg. Industry
7. Construction Industry
8. Cotton Garment Industry
9. Dress Mfg. Ind.
10. Electrical Contracting Ind.
11. Electrical Mfg. Ind.
12. Fab. Metal Prod. Mfg., etc.
13. Fishery Industry
14. Furniture Mfg. Ind.
15. General Contractors Ind.
16. Graphic Arts Ind.
17. Gray Iron Foundry Ind.
18. Hosiery Ind.
19. Infant's & Children's Wear Ind.
20. Iron and Steel Ind.
21. Leather
22. Lumber & Timber Prod. Ind.
23. Mason Contractors Industry
24. Men's Clothing Industry
25. Motion Picture Industry
26. Motor Bus Mfg. Industry (Dropped)
27. Needlework Ind. of Puerto Rico
28. Painting & Paperhanging & Decorating
29. Photo Engraving Industry
30. Plumbing Contracting Industry
31. Retail Food (See No. 42)
32. Retail Lumber Industry
33. Retail Solid Fuel (Dropped)
34. Retail Trade Industry
35. Rubber Mfg. Ind.
36. Rubber Tire Mfg. Ind.
37. Silk Textile Ind.
38. Structural Clay Products Ind.
39. Throwing Industry
40. Trucking Industry
41. Waste Materials Ind.
42. Wholesale & Retail Food Ind. (See No. 31)
43. Wholesale Fresh Fruit & Veg.

In addition to the studies brought to completion, certain materials have been assembled for other industries. These MATERIALS are included in the series and are also made available for confidential use within the Division of Review and for inclusion in Code Histories, as follows:

44. Wool Textile Industry
45. Automotive Parts & Equip. Ind.
46. Baking Industry
47. Canning Industry
48. Coat and Suit Ind.
49. Household Goods & Storage, etc. (Dropped)
50. Motor Vehicle Retailing Trade Ind.
51. Retail Tire & Battery Trade Ind.
52. Ship & Boat Bldg. & Repairing Ind.
53. Wholesaling or Distributing Trade

L. C. Marshall
Director, Division of Review

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FABRICATED METAL PRODUCTS MANUFACTURING AND METAL FINISHING AND METAL COATING INDUSTRY

Foreword

The Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry covers a very broad and diversified field of industry - all the way from horseshoe nails to artistic lighting equipment. Various Census classifications cover parts of the Industry but it is not possible to combine these so as to cover exactly the Code classification. Some branches of the Industry as covered by the Code are not included in the Census data and for others a breakdown of the more-inclusive Census data is not available. In view of this difficulty Code Authority data have been presented rather than original Census data. The Code Authority obtained these data by making the proper adjustment for the difference between Census classifications and Code classification.

The Code Authority was organized out of the Fabricated Metal Products Federation, and, for the most part, the records of the Federation were incorporated into the records of the Code Authority. These records list 7,075 concerns in the Industry, and provide production and financial data for about 40 per cent of the concerns, and wage data for only about one per cent. Because of the broad scope of the Industry, it has been difficult to obtain more complete statistical coverage. Of those concerns reporting, the majority are probably the better organized and operated concerns of the Industry.

The figures taken from the applications for presentation of Codes of Fair Competition are marked estimated wherever they were thus indicated on the code applications. As is indicated by the rounding off of other figures from the same source, it is likely they were estimates also, but it is impossible to determine to what extent this is true.

The Bureau of Labor Statistics data presented in Table XVII constitute the only Government statistics pertaining specifically to the Industry as defined by the Code. All of the material presented in the Appendix was supplied by the Code Authority, and is submitted in the form prepared by it.

CHAPTER I

THE NATURE OF THE INDUSTRY

Size of the Industry

The Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry is composed of approximately 7,075 concerns engaged in the production and wholesale distribution and fabricated metal products.1/ Due to the disorganized condition of this industry prior to the enforcement of the codes no reliable statistics of the total number of concerns operating in pre-code years are available, but the following data for selected sub-groups of the industry as listed in the Appendix under Exhibit A may be taken as a rough indication of the trend for the entire industry during the years 1928-1933.

TABLE I

Number of Concerns, 1928-1933
(Includes only those manufacturing groups listed in Exhibit A)

Year	Number of Concerns
1928	3,145
1929	3,193
1930	3,112
1931	3,054
1932	2,984
1933	2,909

Source: Records of the Code Authority. See Appendix, Exhibit A, for further information.

Geographical Distribution

In the Appendix under Exhibit B is listed the total number of concerns in each State. The distribution among the leading manufacturing States is indicated by Table II.

TABLE II

Total Number of Concerns by States, 1935

State	Number of Concerns
U. S. Total	7,075
New York	1,383
Illinois	786
Pennsylvania	692
Ohio	678
Massachusetts	553
California	450
Connecticut	355
New Jersey	349
Michigan	328
Other States	1,501

Source: Records of the Code Authority. See Appendix, Exhibit B, for further information.

1/ As of May 25, 1935; from records of the Code Authority.

Thus, of the total of 7,075 concerns in the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, 5,574 concerns, or nearly 80 per cent, are concentrated within the Boston-New York-Philadelphia trade area, the Lake States trade area, and the San Francisco trade area.

Number of States in Which Specified Concerns Operate

The Code Authority was able to obtain detailed information on subsidiaries, branch plants, sales offices and warehouses of concerns in the industry only to the limited extent shown in the Appendix under Exhibit J. Table III summarizes this Exhibit after all debatable items are discarded.

TABLE III

81 Concerns Classified According to the Number of States in Which They Had Plants, 1934

Number of States	Number of Concerns	Number of Plants Operated
Total	81	258
One State	31	65
Two States	30	70
Three States	8	34
Four States	9	54
Seven States	1	9
Nine States	2	26

Source: Records of the Code Authority, See Appendix, Exhibit J, for further information.

This tabulation is indicative of the interstate character of the industry. Of 81 concerns with 258 plants the activity of only 31 concerns and 65 plants was confined to a single state. The remainder were operating in two or more states.

Capital Investment

Of the total capital invested in the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, there is no available record, but for the industry sub-groups listed under Exhibit A of the Appendix, invested capital is indicated in Table IV.

TABLE IV

Capital Investment, 1929, 1931, 1933
(Includes only those manufacturing groups listed in Exhibit A)

Year	Amount
1929	$737,[illegible],383
1931	376,605,383
1933	305,352,997

Source: Report of Fabricated Metal Products Federation.

As a supplement to Table IV, reference should be made to Exhibit C of the Appendix showing the financial structure of 166 concerns reporting this type of information. The fixed assets of these concerns are given in the following table.

TABLE V

Fixed Assets of 166 Companies
1929, 1932, 1933

Year	Amount a/
1929	$90,290,841
1932	83,869,306
1933	62,144,295

Source: Fabricated Metal Products Federation. See Appendix, Exhibit C, for further information.

a/ Fixed assets include land, buildings, machinery and equipment less reserves and depreciation.

These 166 concerns in 1933 reported their fixed assets as $62,144,295 and their total assets at $153,350,494, as compared with the $625,332,097 of invested capital of the 2,909 concerns in Exhibit A. The conclusion may be drawn that these 166 concerns were the more important ones in the industry.

Regarding Exhibit C attention is called to the following facts: first, the maintenance of the liquid condition of these 166 concerns in the relationship between their current assets and current liabilities; second, the decline to 68.8 per cent of 1929 values in the fixed assets (a decline in line with the write-down in the assets of other industrial groups); and, third, the rapid decline in surplus, and the change from net profit to net loss with a decline in sales indicating that these concerns must, in the aggregate, total some $11[illegible],000,000 in yearly sales in order not to incur a loss.

Failures and Financial Conditions

In 1934 there were 11 failures in this industry, according to figures compiled from Dun and Bradstreet's by the Cost Accounting Section of the Research and Planning Division of NRA.

Exhibits A and C of the Appendix give, for certain selected concerns, a limited comparison of the financial condition within the Industry for the years 1929, 1932 and 1933. For these concerns, the data for 1932 and 1933 show a net loss.

Volume of Sales and Productive Capacity

For the concerns in the manufacturing sub-groups listed in Exhibit A, the volume of sales is shown in Table VI.

The productive capacity, limited to the same industries, and the estimated percentage of productive capacity utilized, are also shown.

TABLE VI

Productive Capacity, Volume of Sales and Estimated Percentage of Productive Capacity Utilized, 1928-1933
(Includes only those manufacturing groups listed in Exhibit A)

Year	Productive Capacity (In thousands)	Volume of Sales	Per Cent of Productive Capacity Utilized a/
1928	$813,377	$626,626	77.0
1929	913,414	686,799	75.2
1930	887,433	559,179	63.0
1931	873,670	394,305	45.1
1932	856,807	280,225	32.7
1933	783,012	265,062	33.9

Source: Records of the Code Authority. See Appendix, Exhibit A, for further information.

a/ Percentage utilized obtained by calculating the per cent that sales are of total capacity. It is assumed that the periods covered by production and sales are identical, the fact that there may be a lag in sales being disregarded.

On the assumption that the information was compiled without prejudice and that the 2,209 concerns covered - being over 40 per cent of the total number of 7,075 concerns 1/ in 1933 - are representative of all concerns, the above percentages may be considered in a general way to be characteristic of the Industry as a whole.

Table VII gives the sales value or volume for the principal product groups in the Industry for the years 1929, 1931, and 1933. 1934 data are not available. The table shows the precipitous drop in the sales of most of the product groups since 1929. Particularly noticeable is the drop in sales of railway car appliances and ferrous and non-ferrous products in the Chicago area.

1/ See Tables I and III.

TABLE VII

Sales Value or Volume of Principal Product Groups, 1929, 1931, and 1933

Product Groups	Annual Sales or Production 1929	1931	1933
Lighting equipment	$144,965,706	$71,648,552	$ ----
Railway car appliances	52,016,000	9,017,000	4,561,000
Electroplating	23,727,916	13,084,240	9,500,000
Ferrous & non-ferrous products (Chicago)	23,198,000	8,000,000	2,400,000
Steel barrels	25,145,897	12,969,875	6,767,430[a]
Cutlery	21,570,000	14,220,000	8,913,000
Tools & implements	17,740,000[b]	13,317,000[c]	9,900,000
Wire & iron fence	17,628,000	11,752,000	5,875,541
Vitreous enameled ware	17,531,402	14,386,068	7,460,725
Wrenches and pliers	15,000,000	7,000,000[d]	4,500,000[d]
Wire rope and strand	169,398 tons	66,684 tons	22,928 tons[e]
Tubular split & pronged rivets	13,819,000 M	8,537,000 M	6,738,000 M
Wood screws	11,243,761[b]	7,788,352[c]	3,874,531[d]
Drapery & carpet hardware	11,150,000[b]	10,002,075[c]	4,300,000
Files and rasps	11,000,000	6,000,000	6,000,000

Source: Applications for Presentation of Codes of Fair Competition submitted by individual Code Authorities to the NRA.

[a] 7 months. [c] 1930. [e] 6 months.
[b] 1928 [d] Estimate submitted by Code Applicants.

Competing Products

The industries competing with the products of the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry are widely diversified, but consist in the main of those industries manufacturing wood, plastic rubber, and other products which fall under the jurisdiction of other codes.

Market for the Industry's Products

The industries and trades using the products of the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry are widely varied. For instance, it appears from the records of the Code Authority that in 1933 the Shoe Manufacturing Industry used $792,477 worth of shoe shanks; the structural industries used $2,500,000 worth of metallic wall structures and $423,033 worth of metal safety treads; mining used $213,099 worth of mine tools; and paper and pulp mills required $2,822,241 worth of wire cloth.

Chapter II

LABOR STATISTICS

Number of Wage Earners and Total Wages

The number of wage earners and estimated total annual wages paid by the entire industry are given in Table VIII. The data indicate an increase of 98.9 per cent in the annual wage rate as of September 16, 1934, above the annual wage rate of April 1, 1933.

TABLE VIII

Number of Wage Earners and Estimated Total Annual Wage Payments at Current Rate, 1926-September, 1934

Period or Date	Number of Wage Earners	Annual Wage Payments at Current Rate
1926 average	378,927	-----
1929 average	413,053	-----
April 1, 1933	204,515	$145,412,000a/
July 15, 1933	250,284	-----
September 16, 1933	313,752	-----
September 16, 1934	313,000b/	289,225,000c/

Source: Compiled by the Code Authority from the Census of Manufactures, and Trend of Employment published by the Bureau of Labor Statistics; other sources indicated in the footnotes. See Exhibits D, E, and F in the Appendix for further information.

a/ Computed from the figure given as of September 16, 1934, adjusted for the per cent increase in total weekly payrolls as stated at the Public Hearing on the F.M.P. Code.

b/ Computed from the percentage increase in employment as stated at the Public Hearing on the F.M.P. Code.

c/ Computed from the annual weekly earnings as stated at the Public Hearing on the F.M.P. Code, adjusted for the total number of employees and the total number of weeks in a year.

Volume of employment and wages represented as percentages of the May, 1933, level are given in Table IX. This information taken from Exhibit D, Table VII, is not directly comparable to that given in Table VIII because of a difference in the periods covered.

TABLE IX

Volume of Employment and Wages
(May 1933 = 100)

Period	Index of the Number of Employees	Index of Total Payrolls
May, 1933	100.0	100.0
Feb. 1934	153.5	177.9
June 1934	119.5	138.1
Dec. 1934	127.2	153.8
Average, 1934	127.0	151.4 a/

Source: Records of the Code Authority, based upon 2,700 to 3,000 reports from the industry. See Exhibit D, Table VII, in the Appendix, for further information.

a/ On basis of 36-hour week.

Actual Hourly Earnings

The average hourly earnings for unskilled wage earners as reported by 60 concerns are given in Table X.

TABLE X

Average Hourly Earnings for Unskilled Wage Earners, 1926 - September, 1933
(60 concerns)

Period or Date	Average Hourly Earnings Per Unskilled Wage Earner (Cents)
1926 average	33.1
1929 average	35.1
1932 average	31.8
April 1, 1933	27.9
July 15, 1933	26.7
September 16, 1933	32.5

Source: Records of the Code Authority.

The average hourly earnings broken down by wage districts are given in Table XI.

TABLE XI

Average Hourly Earnings, by Wage Districts, 1929-1934
(In cents)

Period or Date	All Reporting Concerns	Northern Wage District	Southern Wage District
1926 average a/	50.3	--	--
1929 average a/	54.9	--	--
May 6, 1933 b/	43.2	43.2	35.0
Feb. 10, 1934 b/	50.5	50.6	41.0
June 15, 1934 b/	52.7	52.9	38.1
Dec. 15, 1934 b/	53.2	--	--
1934 average b/	52.7	--	--

Source: Records of the Code Authority. Blanks indicate data not available.

a/ Based upon reports from 60 concerns.

b/ Based upon 2,700 to 3,000 reports; preliminary figures; 1934 figure represents average for 52 weeks.

Hours of Labor

The average hours worked per week per employee may be summarized as follows:

TABLE XII

Average Hours Worked Per Week, 1926-1934

Period or Date	All Reporting Concerns	Northern Wage District	Southern Wage District
1926 average a/	48.6	-	-
1929 average a/	46.8	-	-
1932 average a/	31.9	-	-
April 1, 1933 a/	34.9	-	-
May 6, 1933 b/	38.9	38.9	41.7
July 15, 1933 a/	43.8	-	-
Sept. 16, 1933 a/	41.3	-	-
Feb. 10, 1934 b/	38.5	38.5	36.0
June 15, 1934 b/	36.9	36.9	33.0
Dec. 15, 1934 b/	37.2	-	-
1934 average b/	35.4	-	-

Source: Records of the Code Authority. Blanks indicate data not available.

a/ Based upon reports from 60 concerns.

b/ Based upon 2,700 to 3,000 reports from the industry.

The fact that average weekly hours in the northern wage district are identical with those for all reporting firms suggests that there are so few plants and employees in the southern district that their hours have no effect where an average is taken for the country as a whole. According to Exhibit B of the Appendix, however, some five per cent of all concerns - although not necessarily of all employees - are located in the southern area. The explanation of the identity of the northern and the United States average may lie rather in the fact that the percentage of southern concerns reporting was too small to obtain proper weighting for that region in arriving at the final average.

Actual Weekly Earnings

The average weekly earnings for the Industry tabulated in Exhibit G of the Appendix show a decline, from May 1933 to December 1934, in the weekly earnings for the southern wage district, a substantial increase in the northern wage district, with a corresponding rise for all reporting concerns.

"Real" Earnings

The following analysis of "real" earnings is based on data submitted by the Code Authority.

TABLE XIII

Average Hourly Earnings per Unskilled Wage Earner, 1926-September, 1933
(60 concerns)

Period or Date	Actual Earnings (cents per hour)	NRA Cost of Living Index (1929-100)	Real Earnings (cents per hr.)
1926 average	33.1	103.9	31.9
1929 average	35.1	100.0	35.1
1932 average	31.8	74.9	42.5
April 1, 1933	27.9	68.4 (April)	40.8
July 15, 1933	26.7	72.7 (July)	36.7
Sept. 16, 1933	32.5	74.5 (Aug.)	43.6

Source: Records of the Code Authority, and NRA.

From the same source, and by means of the same method, the real weekly earnings for unskilled wage earners were computed as given in Table XIV which shows an average increase in real earnings per week of $1.59, as compared with an average decrease of $3.01 in actual average weekly earnings for the same class of wage earners and for the same period.

TABLE XIV

Average Weekly Earnings per Unskilled Wage Earner, 1929 and September 1933 (60 concerns)

Period or Date	Actual Earnings (dollars per week)	NRA Cost of Living Index (1929=100)	Real Earnings (dollars per wk.)
1929 average	16.43	100.0	16.43
Sept. 1933	13.42	74.5 (Aug.)	18.02

Source: Records of the Code Authority.

Miscellaneous

In Exhibit H of the Appendix is given a tabulation of the relationship between the size of wage groups and the comparative number and percentage of reporting concerns and reported employees in each group for 1935; 5,337 concerns having a membership of 225,162 employees comprise the groupings. An additional 2,110 plants were not reported.

Exhibit H indicates that the majority of the concerns in the reporting industries employ less than ten workers.

Exhibit D of the Appendix presents a variety of statistical information regarding wages, employment, and hours of labor. Tables I and II of Exhibit D indicate that about 57 per cent of the wage earners covered, receive as much as 45 cents an hour and that about 55 per cent of the office workers earn as much as $20.00 a week. Table VI of Exhibit D shows that about 43 per cent of the factory workers and about 71 per cent of the office employees work between 37.6 and 40 hours a week.

Table III of Exhibit D shows the number of workers by classes that, out of a total of 172,582, were receiving less than the minimum wage in 1934. In the northern wage district there were 2,102 such workers - 1.2 per cent of the total workers - while the southern district reported only 20 workers. However as has been suggested before 1/ the preponderant number of employees reported for the northern wage district is considered to be due to more complete reporting in that district rather than to the actual geographical distribution of employees.

Table IV of Exhibit D classifies these 172,582 workers into male and female, office and factory, and gives the total workers in each class, with their respective hours and earnings for the week ending December 15, 1934. Table V performs a similar service for the year of 1934 and gives, in addition, an analysis of the equivalent weeks worked on a 40-hour week basis and the average yearly earnings of each class.

1/ See above p. 9 and 10

Effects of the Code on Labor

Table XV presents data on employment, payrolls, hours and wages for 1933 and 1934. These data are the result of a special tabulation undertaken by the Bureau of Labor Statistics, in cooperation with the NRA Research and Planning Division, to provide reliable information regarding the Industry as specifically defined by the Code. They are not strictly comparable with other data already given in this Chapter because of the difference in the size of the sample and in the source supplying the information.

Other material giving a comparison of the pre-Code and Code situation is given in Exhibits D, F, and G of the Appendix.

TABLE XV

Employment, Payrolls, Hours and Wages a/
1933-1934

Month b/	Indexes, 1933 = 100			Average Hours Worked Per Week e/	Wages	
	Employment c/	Payrolls c/	Man-Hours d/		Average e/ Hourly (cents)	Average c/ Weekly (dollars)
1933						
Jan.	84.5	75.9	73.7	31.7	45.4	15.12
Feb.	86.9	79.4	79.1	33.1	44.3	15.39
Mar.	82.1	69.0	70.9	31.4	44.6	13.97
Apr.	84.3	72.8	76.8	33.1	43.7	14.35
May	87.4	85.0	90.5	37.6	43.4	16.17
June	94.5	99.9	107.2	41.2	43.0	17.61
July	101.7	109.0	119.6	42.7	42.1	17.81
Aug.	112.3	117.3	119.6	38.7	44.9	17.33
Sept.	116.5	120.8	116.1	36.2	48.4	17.24
Oct.	118.9	125.3	118.8	36.3	48.6	17.53
Nov.	116.9	123.8	116.2	36.1	48.5	17.31
Dec.	114.0	122.1	111.4	35.5	49.9	17.60
Average	100.00	100.00	100.00	36.1	45.6	16.45
1934						
Jan.	110.0	115.2	104.2	34.4	50.5	17.18
Feb.	114.7	126.0	113.9	36.1	50.1	18.14
Mar.	120.5	136.5	123.4	37.2	50.2	18.69
Apr.	124.0	142.4	127.3	37.3	50.9	18.95
May	124.5	144.4	126.4	36.9	51.7	19.07
June	121.1	138.1	122.0	36.6	51.5	18.75
July	115.4	124.6	109.0	34.3	52.7	17.80
Aug.	112.9	122.0	104.7	33.7	52.9	17.82
Sept.	111.1	117.9	101.6	33.2	53.1	17.69
Oct.	112.2	124.7	107.5	34.8	52.9	18.44
Nov.	113.5	128.9	110.6	35.4	53.0	18.80
Dec.	116.2	139.0	117.7	36.8	53.7	19.79
Average	116.3	130.0	114.0	35.6	51.9	18.43

(Continued)

Source: Unpublished data secured by the Bureau of Labor Statistics in co-operation with the Division of Research and Planning, NRA.

a/ Reporting establishments considered to be almost completely covered by the Fabricated Metal Products Code.
b/ Figures reported were for the payroll period nearest the 15th of the month.
c/ Based upon a representative sample covering an average of 525 establishments and nearly 64,000 employees in 1933. The sample was somewhat larger in 1934.
d/ Computed: Index of employment times average hours worked per week reduced to 1933 = 100.
e/ Based upon a representative sample covering an average of 365 establishments and nearly 49,000 employees in 1933. The sample was considerably larger in 1934.

Employees and Wages by States

No statistics are available covering the total number of employees and the total amount of annual wages by states; but in Exhibit I of the Appendix is shown the number of employees and the annual earnings for 1934 by states for the 2,762 concerns reporting this information to the Code Authority. These 2,762 concerns, with 162,302 employees and an annual payroll of $160,571,947, can be assumed to constitute a fairly representative sample of concerns conservatively estimated to have had 225,000 1/ employees in December 1934, and a calculated payroll of approximately $290,000,000. 2/

A comparison of Exhibit B with Exhibit I indicates that these data are reported more completely for some states than for others, and Exhibit I can therefore be considered only as a rough indicator of the relative importance of the various states.

Wages Compared with Total Value of Product

As shown in Table XVI, wages represent about 27 or 28 per cent of the total value of the product.

TABLE XVI

Percentage Relationship of Wages to the Value of Product, 1926-1932

Date	Per Cent Wages are of Total Value of Product
1926	27.8
1927	28.1
1929	26.7
1932	28.9

Source: Estimates of the Fabricated Metal Products Federation.

1/ See Exhibit A, footnotes "b" and "c."
2/ See Table VIII, above.

Labor Complaints

Between the dates of May 9, 1934, and November 23, 1934, the Compliance Division listed the following labor complaints of infractions of the Fabricated Metal Products Code:

Type of Violations		Number of Complaints
Wage violations		
Art. III -	Wages	48
	Reducing wages	1
	Not paid for overtime	22
	Holding back part of wage	1
	Seeking back wages	7
	Total wage violations	79
Hour violations		
Art. III -	Hours	33
	Hours and wages	53
	Working 7 days a week	4
Art. IV -	Falsifying time cards	1
	Total hour violations	91
Other complaints		
Art. III -	Home work	1
	Classification	6
	Section 7-A	4
	Child labor	2
Art. IV -	Labor provisions not posted	2
	Discrimination and intimidation	7
	Miscellaneous subjects	4
	Total other complaints	26
	Grand total number, all complaints	196

Chapter III

MATERIALS: RAW AND SEMI-PROCESSED

Principal Materials

The principal materials used in the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry are iron, steel and ferrous alloys in the form of billets, bars, rods, sheets and shapes; copper in a variety of forms; lead, zinc, tin, and aluminum. A large proportion of these materials enter into the Industry in the secondary form and emerge as the finished product for the ultimate consumer.

Source of Materials and Equipment

No statistics are available as regards the source of these materials, their volume or their amounts, but it may be assured that the iron, steel and ferrous alloy fabricators draw their material from the Pittsburgh and Birmingham areas, the Lake States, and from the small imports of ferrous products shipped in from the European industrial areas; that they draw on the Western and Lake States, Canada, and Chile as their principal sources of copper; on the Western States, Central States, Canada, and Mexico for lead; on the Western States, Central States, Canada, and Europe for zinc; on the Straits Settlements (Malaya) for tin; and on the New York, Tennessee, and North Carolina producers for aluminum.

The machinery and equipment used in the Industry is manufactured primarily in the machine-manufacturing and machine-tool centers of the Southern New England, New York, Pennsylvania, and North Central States areas.

Cost of Materials Compared with Total Value of Product

On the statement of the Code Authority, the cost of materials plus the costs of management comprise two-thirds the value of the product.

Chapter IV

PRODUCTION AND DISTRIBUTION

Because of the lack of Code Authority information concerning production and distribution, and the overlapping character of Census and Department of Commerce data, practically no reliable information is available on production and distribution for the Industry as defined by this Code. Such relevant data as are available are given in Tables VI and VII above. The Code Authority advises that there have been no important shifts in the centers of production from 1929 to 1935.

Advertising

The Code Authority advises that advertising is conducted in all media, and that some is local and some national in scope.

Chapter V

TRADE PRACTICES

Subsequent to the establishment of the Code, there existed various practices which called for clearer interpretation of Code provisions and more definite adherence to administrative policies.

Certain members of the Coupled Wire and Iron Fence Industry attempted to circumvent the strict observance of filed delivery prices through the utilization of dealers who, by rebating to customers a portion of the dealer's standard discount, cut prices to the consumer.

The Code Authority of the Hot Galvanizing Metal Coating Industry attempted so closely to restrict the form of price filing as to be instrumental in fixing prices.

The Code Authority of the Metallic Hall Structure Industry contended that certain additional provisions were necessary as follows: first, that there should be a ten-day waiting period in filing prices; second, that prices on special requirements as well as standard requirements should be filed; third, that a penalty system should be resolved to prevent selling below cost; and, fourth, that a limitation on free samples should be inaugurated to allow the small manufacturers to more readily compete with those large manufacturers able to furnish elaborate free samples. The Code Authority further requested permission to establish and operate a Central Quantity Bureau to standardize quantities and kinds of materials and services required for each individual job.

The Code Authority for the Cutlery, Manicure Implement, and Painters' and Paperhangers' Tool Manufacturing Industry requested a stay in the price-filing provisions of the Code because of the complexities of products and the difficulty in classifying them as regards quality. It further requested a stay in the determination of a uniform method of accounting, as well as a stay in the prohibition against sales below cost. Amendments were proposed limiting the return of unsatisfactory merchandise and the unlimited guaranteeing of quality merchandise.

In the Milk and Ice Cream Can Manufacturing Industry an attempt was made to restrict the form of sales contract to certain avenues of distribution, to restrict the allowance on cash discounts, and to restrict the classification of consumers.

In general, it is observed that there existed a strong tendency for the authorities either to exceed their prescribed functions or else to favor certain industrial classes in their interpretations of the Codes. The industrialist, on his side, sought to maintain his own general practices as ethical and within the meaning of the law: "Fair trade," yet to consider the practices of his competitors as unjustifiable restriction of his liberties.

Chapter VI

GENERAL INFORMATION

Methods of Transportation Used

According to the experience of the Economic Adviser the ferrous and non-ferrous metals that enter into the manufacture of Fabricated Metal Products are shipped from the plants undertaking the initial conversion into the required forms, by railroad, water, or truck, to the plants of the Fabricated metal Products Manufacturers. There the punching, pressing, molding, machining, and conditioning operations create the form in which the product is again shipped - by means of railroad, or truck, in carload or less-than-carload lots - to the manufacturers assembling the products with other commodities, or to the wholesale and retail distributors throughout this country and abroad.

Trade Association Activity

According to the Code Authority the trade associations and cooperative activities within this Industry vary. Some associations are of long standing while others came into being only with the Code Authority and the National Recovery Act.

Relationship between Labor and Management

Again according to the Code Authority, the relationship between labor and management within the Industry appears cordial; as the ratio of one code infraction per 2,519 employees for the period from May 9, 1934 to November 24, 1934, tends to indicate. 1/

Trade Union Activity

There has been little unionization among labor and such as has existed has been confined for the most part to company unions. The Code Authority knows of no organization of different labor groups in this Industry. The American Federation of Labor has unionized very few shops. This lack of trade union activity has been ascribed to the fair treatment accorded employees.

Effect of the Code on the Industry

The Code Authority affirms that the Code of Fair Competition has had an important effect upon the Industry. It has materially aided in increasing employment and wages and in decreasing hours as a review of the preceding sections of this report - particularly Chapter II -- will demonstrate.

Use of Trade Marks

According to the Code Authority, practically all the products of this Industry are trade marked.

1/ Compliance Division Report, December 10, 1934.

Foreign Competition

Again on the testimony of the Code Authority, some foreign imports, such as steel pins, wire cloth, and electric shells for electric light bulbs, have proven a material menace. In the majority of other fields, foreign imports have had little, if any, effect on the Industry.

List of Experts

As regards technical experts in the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, Mr. W. A. Fisher of the Code Authority has furnished the following names and information:

A. M. Ferry, 1427 I Street, Washington, D. C.
Has had 20 years experience in trade associations and is an expert on wire cloth.

D. S. Hunter, Keith Bldg., Cleveland, Ohio.
Qualified as an authority on steel barrels and drums, galvanized wire and fabricated metal products in general.

William Goss, Scovill Manufacturing Co., Waterbury, Connecticut.
A qualified industrialist.

Leonard Mortimer, Interstate Tariff Commission.
An expert on all metals.

Joseph E. Peterson, Ref. George Myrick, Jr., Chief, Former Economic Adviser on Fabricated Metal Products Code.

W. A. Fisher, 729 15th Street, N. W., Washington, D. C.
Statistician, Code Authority for the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry.

SOURCES

All statistical data in this report, unless otherwise specifically identified, have been compiled for this division by the Code Authority of the subject Industry. All opinions, unless specifically identified, have been based upon the data of the Code Authority, the "Applications for Presentation of Codes of Fair Competition," the Research and Planning Division report entitled "Material Bearing on the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry," and upon the experience of the writer.

APPENDIX

List of Exhibits (as submitted by the Code Authority)

Exhibit A .....Size of Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, 1928-1933.

Exhibit B .....Number of Concerns Listed with the Code Authority of the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, by States.

Exhibit C .....Data for Fabricated Metal Products Industry for Use of Durable Goods Industries Committee.

Exhibit D .....Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry.

Table I....Distribution of Factory Workers According to Wage Groups
Table II...Distribution of Office Employees According to Wage Groups
Table III..Workers Receiving Less Than the Minimum Wage
Table IV...Volume of Employment and Wages During Week Ending December 15, 1934.
Table V....Volume of Employment and Wages During Year of 1934.
Table VI...Distribution of Workers According to Hour Groups
Table VII..Volume of Employment and Wages

Exhibit E .....Average Number of Wage Earners in the Fabricated Metal Products Manufacturing and Metal Finishing and Coating Industry, 1926-1933. (Two tables.)

Exhibit F .....Comparison of Changes in Wages and Employment in the Fabricated Metal Products Industry as Disclosed by Various Sets of Data.

Exhibit G .....Average Weekly Earnings Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, May 6, 1933 to December 15, 1934.

Exhibit H .....Number of Concerns and Number of Employees Reported, Form 10 and Other Sources by Size Groups.

Exhibit I .....Classification by States of Number of Employees and Annual Earnings for 1934 Fabricated Metal Products and Metal Finishing and Metal Coating Industry.

Exhibit J .....Subsidiaries, Branch Plants, Sales Offices and Warehouses of Concerns in the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry.

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Size of Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry, 1926-1933
(Includes only those products groups on attached list) a/

Years	No. of Concerns	Number of Employees		Invested Capital			Sales			Production Capacity		
		Number	No. Per Concern	Amount Dollars	Amt. Per Concern Dollars	Amt. Per Empl. Dols.	Amount Dollars	Amt. Per Concern Dollars	Amt. Per Empl. Dols.	Amount Dollars	Amt. Per Concern Dollars	Amt. Per Empl Dols
1926	3,145	155,796	49.5	698,200,214	222,003	4,482	626,626,444	199,245	4,022	813,377,159	258,625	5,221
1929	3,193	164,520	51.5	737,242,263	230,893	4,481	686,799,203	215,095	4,175	913,413,597	286,068	5,552
1930	3,112	145,465	46.7	712,184,077	228,851	4,896	559,178,640	179,685	3,844	887,463,233	285,175	6,101
1931	3,054	126,612	41.5	678,603 283	222,201	5,460	394,304,511	129,111	3,114	873,669,701	286,074	6,900
1932	2,984	108,945	36.5	643,147,465	215,532	5,903	280,225,066	93,909	2,572	856,807,075	287 134	7,865
1933	2,909 b/	112,633 c/	38.7	625,332,097	214,965	5,552	265,061,638	91,118	2,353	782,012,174	268,825	6,943

a/ Source: Compiled by the Code Authority from information supplied it by the various groups listed, on Form 504—Application for Presentation of a Code to NRA.

b/ On May 21, 1935, this figure can be accurately stated to be 7,075 for the Industry as a whole. See Exhibit B.

c/ For Dec. 1934, this figure may be conservatively estimated to be 225,000 for the Industry as a whole. See Exhibit I.

The attached data represent information from only a portion of the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry. The data represent groups manufacturing the following products:

Aluminum Wares
Cutlery
Cut Tacks, Wire Tacks
Fire Pots & Blow Torches
Lift Trucks & Portable Elevators
Wire Cotton Tie Buckles
Brass Forgings
Bright Wire Goods
Chain
Chucks
Drapery & Carpet Hardware
Electric Industrial Trucks
Electro Plating & Metal Polishing
Files
Flexible Metal Hose & Tubing
Forged Tools
Galvanized Ware
Tools & Implements
Hack Saws
Hand Bag Frames
Hand Chain Hoist
Industrial Wire Cloth
Wrenches
Insulated Containers
Liquid Fuel Appliances
Lock & Builders Hardware
Machine Screw Nut
Machinist Precision Tools
Metal Safety Tread
Milk & Ice Cream Cans
Mine Tools
Display Equipment
Augur Bits
Cutting Dies
Job Galvanizing
Metal Spinning & Stamping
Screw Machine Products
Steel Partition
Open Steel Flooring
Non-Ferrous Hot Water Tanks
Perforated Metal
Pipe Tools
Porcelain Enamel
Power & Gang Lawn Mowers
Railway Brake Beams
Railway Car Appliances
Refrigeration Valves & Fittings
Shoe Shanks
Snap Fasteners
Socket Screws
Steel Barrels
Steel Package
Thermostatic Bi Metal
Ash Can
Shoe Machinery
Cap Screws
Gold Leaf
Machine Screws
Wood Screws
Vises
Vitreous Enamel Ware
Washing Machine Parts
Wire Cloth
Wire Rope & Strand
Wheelbarrow
Advertising Metal Sign & Display Equipment
Artistic Lighting Equipment
Corset Steel
Furnace Pipe & Elbows
Hog Rings
Tackle Blocks
Wire & Iron Fence

Exhibit B

Number of Concerns Listed with the Code Authority of the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry by States

State	No. of Concerns
Alabama	22
Arizona	5
Arkansas	12
California	450
Colorado	33
Connecticut	355
Delaware	5
District of Columbia	26
Florida	28
Georgia	27
Idaho	1
Illinois	786
Indiana	174
Iowa	54
Kansas	20
Kentucky	27
Louisiana	19
Maine	25
Maryland	56
Massachusetts	553
Michigan	323
Minnesota	113
Mississippi	3
Missouri	199
Montana	1
Nebraska	34
New Hampshire	30
New Jersey	349
New Mexico	1
New York	1,383
N. Carolina	15
N. Dakota	3
Ohio	673
Oklahoma	29
Oregon	33
Pennsylvania	692
Rhode Island	80
S. Carolina	4
S. Dakota	1
Tennessee	4
Texas	72
Utah	6
Vermont	11
Virginia	21
Washington	62
W. Virginia	21
Wisconsin	179
Total	7,075

Source: Compiled by the Code Authority

Exhibit C

Data for Fabricated Metal Products Industry
For Use of Durable Goods Industries Committee
Financial Information

	1929	1932	Per cent 1932 is of 1929	1933	Per cent 1933 is of 1929	Per cent 1933 is of 1932
Number of Companies Reporting	166	166	100.0	166	100.0	100.0
Current assets at end of year named: Include—Cash, accounts and notes receivable less reserves, Inventories less reserves, Securities at market	$129,852,362	$89,903,052	69.2	$91,406,199	70.4	101.7
Fixed Assets at end of year named: Include—Land, Buildings, Machinery and Equipment less reserves and depreciation	90,290,841	83,869,306	92.9	62,144,295	68.8	74.1
Total Assets	220,163,403	173,772,358	78.9	153,550,494	69.8	88.4
Current liabilities at end of year named: Include—Accounts payable, borrowed money, Taxes accrued and payable, accrued payrolls, and dividends declared and payable	27,709,955	22,690,205	81.9	24,688,047	89.1	108.8
Total Assets less liabilities	192,433,448	151,082,153	78.5	128,862,447	69.96	85.3
Capital at end of year named: Include—Common and Preferred stocks at par of declared value. Capital Notes and Bonds.	145,001,007	130,480,272	89.98	126,147,384	87.0	96.7
Surplus at end of year	61,985,019	30,253,049	48.8	28,224,610	45.5	93.3
Net Profit or Loss for year	19,715,369	13,744,582 (Loss)	-169.7	3,767,331 (Loss)	-119.1	-27.4 (Loss)
Sales for Year	247,387,891	97,990,983	39.6	113,130,327	45.7	115.4

Data for Fabricated Metal Products Industry
For Use of Durable Goods Industries Committee
Wages and Hours

	July 1929	February 1933	Per cent Feb. 1933 is of July 1929	July 1933	Per cent July 1933 is of July 1929	Sept. 1933	Per cent Sept. 1933 is of July 1929
Number of Companies Reporting	169	169		169		169	
Total Number Employees (Any week in the designated month)	44,337	25,497	57.5	29,134	65.7	37,644	84.9
Average Earnings Per hour of Shop Employees paid on hourly basis including piece work earnings — Common Labor	40.9	33.2	81.2	32.5	79.5	36.9	90.2
Average Earnings Per hour of Shop Employees paid on hourly basis including piece work earnings — All other labor	56.9	45.4	79.8	44.2	77.7	49.1	86.3
Average hours per week actually worked by Shop Employees paid on hourly and for piece work basis	48.6	33.3	68.5	39.2	80.7	35.8	73.7
Average Hours per week worked by Salary Employees	44.4	42.0		42.2		39.9	

Source: Compiled by the Code Authority.

Reports used in F. M. P. F. Compilation
For Use of Durable Goods Industries Committee

Individuals

F. B. Williams Co.
C. B. Porter Co.
Berger Bros. Co.
Emil Steinhorst & Sons
By Products Steel Corp.
Standards Brass Mfg. Co.
Marquette Metal Products Co.
National Standard Co.
The Seng Co.
Floyd Mfg. Co.
Bridgeport Brass Co.
Stefco Steel Co.
Lyons Mfg. Co.
Dietz Co.
Homestead Valve Mfg. Co.
Durant Mfg. Co.
Bowen Prod. Corp.
American Casting & Mfg. Co.
Ashton Valve Co.
Torrey Roller Bushing
Dill Mfg. Co.
Glascock Bros. Mfg. Co.
Tuttle & Bailey, Inc.
Consolidated Safety Pin Co.
Oster-Williams
Lufkin Rule Co.
Manning, Maxwell & Moore
Hauck Mfg. Co.
Roofing & Corrugating Co.
Nat'l Metal Prod. Co.
New Delphos Mfg. Co.
Superior Sheet Metal Wks.
Central Valve Mfg. Co.
Chicago Blow Pipe Co.
W. H. Handy & Sons Co.
Torrington Mfg. Co.
Veeder Root, Inc.

Associations

American Cutlery
Lock & Builders
Electrical Industrial Truck
Hand Chain Hoist
General Tool & Implement
D. S. Hunter & Associates
Cycle Parts & Accessories

Exhibit D

Fabricated Metal Products Manufacturing and
Metal Finishing and Metal Coating Industry
(2946 co
(2946 complete reports for December, 1934 and Annual 1934)

TABLE I

Distribution of Factory Workers According to Wage Groups

Hourly Wage Rate	Number of Workers	Per Cent of Total	Cumulative Per Cent
Under 24.0¢	75	.05	-
24.0 to 27.9¢	440	.28	.33
28.0 to 31.9¢	1,747	1.12	1.45
32.0 to 34.9¢	2,008	1.28	2.73
35.0 to 39.9¢	20,131	12.86	15.39
40.0 to 44.9¢	43,200	27.61	43.20
45.0 to 49.9¢	21,581	13.79	56.99
50.0 to 54.9¢	18,490	11.82	68.81
55.0 to 59.9¢	13,012	8.32	77.13
60.0 to 69.9¢	18,138	11.59	88.72
70.0 to 79.9¢	9,867	6.31	95.03
80.0 and over	7,772	4.97	100.00
Total	156,461	100.00	--

TABLE II

Distribution of Office Employees According to Wage Groups

Actual Weekly Wage	Number of Employees	Per Cent of Total	Cumulative Per Cent
Under $9.60	121	.75	--
$9.60 to 11.19	76	.47	1.22
$11.20 to 11.99	99	.61	1.83
$12.00 to 13.99	248	1.54	3.37
$14.00 to 14.49	1,288	7.99	11.36
$14.50 to 14.99	232	1.44	12.80
$15.00 to 17.99	3,639	22.57	35.37
$18.00 to 19.99	1,562	9.69	45.06
$20.00 to 21.99	1,569	9.73	54.79
$22.00 to 24.99	1,552	9.63	64.42
$25.00 to 29.99	2,160	13.40	77.82
$30.00 to 34.00	1,505	9.34	87.16
$35.00 and over	2,070	12.84	100.00
Total	16,121	100.00	--

TABLE III

Workers Receiving Less Than Minimum Wage

	Northern Wage District		Southern Wage District	
	Wage Rate	Number of Workers	Wage Rate	Number of Workers
Apprentices	40¢ per hr.	161	35¢ per hr.	0
Male learners; male handicapped workers	32¢ per hr.	135	28¢ per hr.	1
Female learners; female handicapped workers	28¢ per hr.	59	24¢ per hr.	0
Watchmen	32¢ per hr.	82	28¢ per hr.	0
Male factory workers; truckmen; maintenance men	40¢ per hr.	560	35¢ per hr.	17
Female factory workers	35¢ per hr.	402	30¢ per hr.	0
Office boys and girls	$13 per wk.	79	$13 per wk.	0
All other office workers	$15 per wk.	634	$15 per wk.	2

TABLE IV

Volume of Employment and Wages During Week Ending December 15, 1934

Class of Workers	Number of Workers	Total Man-Hours Worked	Total Actual Payroll	Average Weekly Hours	Average Hourly Earnings	Average Weekly Earnings
Factory, male	131,338	5,052,834	$2,758,838	38.5	54.8¢	$21.01
Factory, female	25,123	929,775	362,412	37.0	39.0¢	14.42
Factory, all	156,461	5,982,609	3,121,250	38.1	52.3¢	19.95
Office, all	16,121	673,352	386,788	39.3	31.0¢	23.99
Total workers	172,582	6,656,961	3,508,038	38.2	53.2¢	20.33

TABLE V

Volume of Employment and Wages During Year of 1934

Class of Workers	Number of Workers	Total Man hours Worked	Total Actual Payroll	Average Weekly Hours (52 Wks.)	Average Hourly Earnings	Average Weekly Earnings	Average Hours Per Year	Average Number of 40 hour weeks per year per employee	Average Yearly Earnings
Factory	156,339	286,197,745	$147,646,639	35.2	51.6¢	$18.16	1,831	45.8	$ 944
Office	15,960	30,697,592	$ 19,414,063	37.0	63.2¢	$23.39	1,923	48.1	$1,216
Total	172,299	316,895,337	$167,060,702	35.4	52.7¢	$18.65	1,839	46.0	$ 970

TABLE VI

Distribution of Workers According to Hour Groups

Actual Hours Worked	Factory Employees			Office Employees		
	Number of Workers	Per cent of Total	Cumulative Per cent	Number of Workers	Per cent of Total	Cumulative Per cent
20.0 hours and under	8,359	5.34	5.34	205	1.27	1.27
20.1 to 25.0 hours	7,405	4.73	10.07	121	.75	2.02
25.1 to 30.0 "	6,626	4.24	14.31	87	.54	2.56
30.1 to 35.0 "	17,339	11.08	25.39	668	4.14	6.70
35.1 to 37.5 "	7,585	4.85	30.24	1,138	7.06	13.76
37.6 to 40.0 "	66,635	42.59	72.83	11,417	70.82	84.58
40.1 to 42.5 "	11,020	7.04	79.87	1,095	6.79	91.37
42.6 to 45.0 "	10,131	6.48	86.35	927	5.75	97.12
45.1 to 48.0 "	10,959	7.00	93.35	220	1.37	98.49
48.1 to 56.0 "	6,993	4.47	97.82	243	1.51	100.00
56.1 and over	3,409	2.18	100.00			
Total	156,461	100.00		16,121	100.00	

TABLE VII

Volume of Employment and Wages

Date	Number of Employees	Total Man-Hours Worked	Total Payroll
May 1933	100.0	100.0	100.0
Feb. 1934	153.5	158.1	177.9
June 1934	119.5	113.3	138.1
Dec. 1934	127.2	124.9	153.8
Annual 1934	127.0	124.0 a/	151.4 a/

a/ On basis of 36 hour week.

Source: Compiled by the Code Authority.

Exhibit E

TABLE I

Average Number of Wage Earners in the Fabricated Metal Products Manufacturing and Metal Finishing and Coating Industry, 1926-1933

Date (1)	Number of Wage Earners (2)	Per Cent of 1926 (3)	Per Cent Increase Over April 1, 1933 (4)
1926	378,927	100.0	85.3
1929	413,053	109.0	102.0
April 1, 1933 ...	204,515	53.8	-
July 15, 1933 ...	250,284	66.1	22.4
Sept. 16, 1933 a/	313,752	82.8	53.4

Source: Compiled by the Code Authority from U. S. Census of Manufactures, and Bureau of Labor Statistics data.

a/ Result of projection of per cent in column 4, Table II.

TABLE II

Average Number of Wage Earners on the Payroll of the Fabricated Metal Products Manufacturing and Metal Finishing and Coating Industry, 1926-1933 a/ (Representative concerns)

Date (1)	Number of Firms Reporting (2)	Number of Wage Earners (3)	Per Cent of 1926 (4)	Per Cent Increase Over April 1, 1933 (5)
1926	60	20,350	100.0	84.8
1929	60	21,157	103.4	89.2
April 1, 1933 ...	60	11,[illegible]	[illegible].1	-
July 15, 1933 ...	60	12,[illegible]	67.[illegible]	25.3
Sept. 16, 1933 ..	60	17,[illegible]	[illegible]	53.0

Source: Compiled by the Code Authority.
a/ For typical weeks, except where otherwise specified.

Comparison of Changes in Wages and Employment in the Fabricated Metal Products Industry as Disclosed by Various Sets of Data

Items	Statements at Public Hearing on F. M. P. Code. a/ (Changes April 1, 1933 to September 16, 1934)	Actual data collected from 2,698 reports on Form 7 (Changes May 6, 1933 to February 14, 1934)	National Industrial Conference Board Reports on Foundries and Machine Shops. (Changes May 1, 1933 to February, 1934)
Number of Workers	+ 53.0%	+ 53.5%	+ 37.2%
Man-hours worked	+ 71.0%	+ 52.1%	+ 47.7%
Average Weekly Hours	+ 18.3%	- 1.0%	+ 7.6%
Average Weekly Hours at End of Period	41.3 hours b/	35.5 hours	35.2 hours
Total Weekly Payrolls	+ 98.9%	+ 51.6%	+ 71.9%
Average Hourly Earnings	+ 16.5% c/	+ 16.9%	+ 16.1%
Average Hourly Earnings at End of Period	45.0 cents d/	51.5 cents	55.3 cents
Average Weekly Earnings	+ 30.1% d/	+ 16.1%	+ 22.9%
Average Weekly Earnings at End of Period	$17.77 d/	$18.50	$19.48

Source: Compiled by the Code Authority.

a/ Based on reports from 65 representative concerns.
b/ 34.0 hours predicted on basis of Mr. Pritchard's experience.
c/ Unskilled only.
d/ Not disclosed at Public Hearing.

Exhibit G

Average Weekly Earnings
Fabricated Metal Products Manufacturing and
Metal Finishing and Metal Coating Industry
(May 6, 1933 to Dec. 15, 1934)

Period	Northern Wage District	Southern Wage District	All Reporting Firms
May 6, 1933	$16.82	$14.60	$16.81
Feb. 10, 1934	19.50	18.79	19.48
June 15, 1934	19.54	18.57	19.44
Dec. 15, 1934	not segregated		20.33
1934 Annual a/	not segregated		18.65

Source: Compiled by the Code Authority from the Industry; December and Annual Figures preliminary.

a/ For 52 weeks.

Exhibit H

Number of Concerns and Number of Employees, Form 10 and Other Sources, by Size Groups a/

Size Group	Form 10 Concerns Number	Form 10 Concerns Per cent of Total	Form 10 Concerns Cumulative Per cent	Concerns Reporting On: Other Sources Number	Other Sources Per cent of Total	Other Sources Cumulative Per cent	Total Sources Number	Total Sources Per cent of Total	Total Sources Cumulative Per cent
0	102	2.8	2.8	185	11.2	11.2	287	5 4	.4
1 5	1,032	28 0	30.8	700	42.5	53.7	1,732	32.5	37 9
6-10	543	4 7	45.5	264	16.0	69 7	807	15.1	53
11-25	761	20.6	66.1	221	13.4	83.1	982	18.4	71.4
26-50	463	12.5	78.6	127	7.7	90.8	590	11 1	82.5
51-75	217	5.9	84.5	47	2.9	93.7	264	4 9	87 4
76-100	148	4 0	88.5	28	1.7	95.4	176	3.3	90.7
101-150	148	4.0	92.5	28	1 7	97.1	176	3.3	94 0
151 200	70	1.9	94 4	13	.8	97 9	83	1.5	95 2
201-300	87	2.4	96.8	14	.9	98.8	101	1.9	97.4
301-400	42	1.1	97.9	7	.4	99.2	49	.9	98 3
401 500	26	.7	98.6	4	.2	99.4	30	.6	98.9
501-1000	41	1.1	99.7	6	.4	99.8	47	.9	99.8
1000+	10	.3	100.0	3	2	100 0	13	2	100.0
Total	3,690	100.0		1,647	100.0		5,337	00.0	

Size Group	Form 10 Employees Number	Form 10 Employees Per cent of Total	Form 10 Employees Cumulative Per cent	Number of Employees Reported On: Other Sources Number	Other Sources Per cent of Total	Other Sources Cumulative Per cent	Total Sources Number	Total Sources Per cent of Total	Total Sources Cumulative Per cent
0	0	0	0	0	0	0	0	0	0
1-5	2,778	1.5	1.5	1,835	4.5	4.5	4,613	2.0	2.0
6-10	4,183	2.3	3.8	1,987	4 9	9.4	6,170	2.7	4.7
11-25	12,678	6.9	10.7	3,691	9 1	18.5	16,269	7 2	11.9
26-50	16,569	9.0	19.7	4, 85	10 8	29.3	20,954	9.3	21.2
51-75	13,745	7.4	27.1	2,913	7.2	36.5	16,658	7.4	28.6
76-100	12,742	6.9	34.0	4,006	9.8	46 3	16,848	7.5	36.1
101-150	18,285	9.9	43.9	3 49	8.5	54.8	21,734	9.7	45.8
151-200	11,792	6.4	50.3	2,324	5.7	60.5	14,116	6.3	52.1
201-300	21,029	11.4	61.7	3 505	8.6	69.1	24,534	10,9	63.0
301-400	14,240	7.7	69 4	2,415	5.9	75.0	16,655	7.4	70.4
401-500	11,485	6.2	75.6	1,680	4.1	79.1	13,165	5.9	76.3
501-1000	28,175	15.3	90 9	4,079	10.0	89.1	32,254	14.3	90.6
1000+	16,756	9.1	1 .0	4,436	10.9	100.0	21,192	9.4	100.0
Total	184,457	100.0		40,705	100.0		225,162	100.0	

Source: Compiled by the Ohio Authority.

a/ In addition there were no reports received from approximately 2,110 plants which brings the total number of plants in the industry to 7,447 (7,170 concerns).

Exhibit I

Classification by States of Number of Employees and Annual Earnings for 1934 Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry (As reported on Code Authority's form 10 and compiled by it)

State	Number of Reports	Number of Employees	Annual Earnings 1934
Alabama	4	120	$ 77,161
Arkansas	2	163	108,254
California	96	2,392	2,347,090
Colorado	11	123	90,604
Connecticut	215	33,273	30,750,246
Delaware	2	32	34,761
Dist. of Columbia	4	43	65,869
Florida	2	7	4,407
Georgia	7	347	134,413
Illinois	351	12,431	15,653,556
Indiana	78	4,031	3,505,748
Iowa	15	259	220,766
Kansas	4	467	495,153
Kentucky	14	608	559,897
Louisiana	3	94	54,689
Maine	6	186	173,260
Maryland	21	1,228	1,087,222
Massachusetts	210	11,533	11,918,357
Michigan	136	8,058	9,393,828
Minnesota	33	1,137	1,087,041
Mississippi	2	13	8,847
Missouri	78	3,720	3,446,624
Nebraska	4	258	35,643
New Hampshire	15	731	805,860
New Jersey	151	7,562	8,084,059
New York	386	15,260	12,746,105
North Carolina	1	11	14,171
North Dakota	1	2	1,438
Ohio	377	26,670	25,371,041
Oklahoma	3	48	44,878
Oregon	13	111	23,762
Pennsylvania	313	16,724	15,681,038
Rhode Island	34	3,034	2,856,555
South Carolina	1	7	6,508
Tennessee	15	1,178	866,288
Texas	22	534	396,190
Vermont	5	94	81,828
Virginia	5	122	102,287
Washington	20	262	278,556
West Virginia	12	3,662	3,316,568
Wisconsin	90	7,268	8,641,379
Total	2,760	169,738	160,571,947

Source: Compiled by the Code Authority.

Exhibit J

Subsidiaries, Branch Plants, Sales Offices and Warehouses of Concerns in the Fabricated Metal Products Manufacturing and Metal Finishing and Metal Coating Industry (As indicated by the records of the Code Authority, and compiled by it)

Aluminum Goods Mfg. Co.
Manitowoc, Wis.

Plants:
Two Rivers, Wis.
Manitowoc, Wis.

Aluminum Specialty Co.
Manitowoc, Wis.

Branch:
Chilton, Wis.

American Brass Co.
Waterbury, Conn.

Mills & Factories
Ansonia, Conn.
Buffalo, N. Y.
Buffalo, N. Y.
Detroit, Mich.
Kenosha, Wis.
Torrington, Conn.
Waterbury, Conn. (Waterbury Brass Goods Corp.)
Waterbury, Conn. (American Metal Hose Co.)

Offices & Agencies
New York, N. Y.
Washington, D. C.
Newark, N. J.
Providence, R. I.
Atlanta, Ga.
Cleveland, Ohio
Chicago, Ill.
Cincinnati, Ohio
Dayton, Ohio
Phila., Pa.
Boston, Mass.
St. Louis, Mo.
Houston, Texas
Pittsburgh, Pa.
San Francisco, Calif.

American Car & Foundry Co.
New York City

Plants:
Detroit, Mich.
Branch: Steel Dept., Milton, Pa.

American Chain Co., Inc.
Bridgeport, Conn.

Associate Companies:
- Andrew C. Campbell Div.
- Manley Mfg. Div.
- Page Steel & Wire Div., Monessen, Pa.
- Wright Mfg. Div., York, Pa.
- American Cable Co., Ind.
  - Offices:
    - Los Angeles, Calif.
    - Atlanta, Ga.
    - San Francisco, Calif.
    - Pittsburgh, Pa.
    - Houston, Texas
    - Chicago, Ill.
    - New York City
    - Philadelphia, Pa.
- Ford Chain Block Co.
- Hazard Wire Rope Co.
- Highland Iron & Steel Co.
- Owen Silent Spring Co., Inc.
- Reading-Pratt & Cady Co., Ind.
  - Hartford, Conn.
- Rubber Shock Insulator Corp.

Branches:
- Hartford, Conn.
- Bridgeport, Conn.
- Braddock, Pa.
- York, Pa.

American Fork & Hoe Co.

Branches:
- Ashtabula, Ohio
- Wallingford, Vt.
- Conneaut, Ohio
- Ft. Madison, Iowa
- Geneva, Ohio
- Memphis, Tenn.
- Charleston, W. Va.
- Dunkirk, N. Y.
- Chicago, Ill.
- New York, N. Y.
- Cleveland, Ohio
- North Girard, Pa.

American Hardware Corp.
New Britain, Conn.

Subsidiaries:
- Corbin Cabinet Lock Co., New Britain, Conn.
- P. & F. Corbin, New Britain, Conn.

Subidiaries: (Cont'd)
Russell & Erwin Mfg. Co.,
New Britain, Conn.
Corbin Screw Corp.,
New Britain, Conn.
Branches:
Chicago, Ill.
New York, N. Y.
Dayton, Ohio
Philadelphia, Penna.

American Machine &
Foundry Co.
Brooklyn, N. Y.

Wahlstrom Tool Division

American Steel & Wire Co.
Cleveland, Ohio

(Subsidiary of U. S. Steel Corp.)

Warehouses:
Atlanta, Ga.
Baltimore, Md.
Buffalo, N. Y.
Cleveland, Ohio
Denver, Colo.
Detroit, Mich.
Fargo, N. D.
Kansas City, Mo.
Chicago, Ill.
Louisville, Ky.
New York, N. Y.
Pittsburgh, Penna.
St. Louis, Mo.

Plants and Factories:
Worcester, Mass.
De Kalb, Ill.
Waukegan, Ill.
Chicago, Ill.
Kansas City, Mo.
Indiana
Trenton, N. J.
Ohio
Pennsylvania
Minnesota
Atlanta, Ga.
Joliet, Ill.
Scott St. Works
Rockdale Works
New Haven, Conn. Works
Cleveland, Ohio
Cuyahoga Works
Consolidated Works

American Stove Co.
2001 S. Kings highway
St. Louis, Mo.

Branch Offices:
San Francisco, Calif.
Atlanta, Ga.
Chicago, Ill.
Boston, Mass.
New York City
Cleveland, Ohio

Philadelphia, Penna.

Factory Plants:
Harvey, Ill.
St. Louis, Mo.
Cleveland, Ohio (Oil &
Gasoline Div.)
Loraine, Ohio

Ames Baldwin Wyoming Co. Parkersburg, W. Va.	Factories: Main Plant, Parkersburg, W. Va. North Easton, Mass.
E. C. Atkins Co.	Main Plant: Indianapolis, Ind. Branch Offices: Chicago, Ill. New York City Atlanta, Ga. Memphis, Tenn. New Orleans, La. Portland, Oregon Seattle, Wash. Klamath Falls, Oregon
Atlas Fence Co. Philadelphia, Pa.	Subsidiary of Manganese Steel Forge Co., Philadelphia, Pa.
Audubon Wire Cloth Corp. Philadelphia, Pa.	Subsidiary of Manganese Steel Forge Co., Philadelphia, Pa.
Barrett-Cravens Co. Chicago, Ill.	Subsidiary: Semple & Reddick Co. Hillside, N. J.
C. J. Bates & Son New Haven, Conn.	Branch Factory: Chester, Conn.
E. Behringer Metal Wks. Newark, N. J.	Subsidiary of Wisner Mfg. Co.
Benjamin Electric Mfg. Co. DesPlaines, Ill.	Branch: Porcelain Enameling & Stamping Div. DesPlaines, Ill.
Bohn Aluminum & Brass Corp. Detroit, Mich.	Plants: Brass Forging, Detroit, Mich. Capitol Brass Div., Detroit, Mich.
Brewer-Titchener Corp. Courtland, N. Y.	Branches: Crandal Stone Div. Binghamton, N. Y.

Broderick & Bascom Rope Co. (Main Plant)
St. Louis, Mo.

Philip Carey Mfg. Co.
Lockland, Cincinnati, Ohio

Branch Plant:
Middletown, Ohio

Champion Lighting Co.
Phila., Pa.

Branches: (Cont'd)
Cortland Forging Div.
Cortland, N. Y.

Cortland Carriage Goods Div.
Cortland, N. Y.

Warehouses:
New York, N. Y.
Houston, Texas
Portland, Oregon

Branch Plants:
Seattle, Wash.
Peoria, Ill.
S. Bartonvill, Ill.

Branch Offices:
Atlanta, Ga.
Baltimore, Md.
Boston, Mass.
Charlotte, N. C.
Chicago, Ill.
Cincinnati, Ohio
Columbus, Ohio
Dallas, Texas
Dayton, Ohio
Indianapolis, Ind.
Jacksonville, Fla.
Kansas City, Mo.
Louisville, Ky.
Minneapolis, Minn.
New Orleans, La.
New York, N. Y.
Omaha, Neb.
Phila., Pa.
Pittsburgh, Pa.
Salt Lake City, Utah
Wheeling, W. Va.
Lockland, Ohio
Plymouth Meeting, Pa.
East St. Louis, Ill.
Salt Lake City, Utah

Sales Agent: Salmonson & Co.
New York City

Chase Companies, Inc.
Waterbury, Conn.

Warehouses:
New York, N. Y.
Boston, Mass.
St. Louis, Mo.
Newark, N. J.
Phila., Pa.
Baltimore, Md.
Pittsburgh, Pa.
Cincinnati, Ohio
Cleveland, Ohio
Detroit, Mich.
Chicago, Ill.
Milwaukee, Wis.
Minneapolis, Minn.
New Orleans, La.
Los Angeles, Calif.
San Francisco, Calif.
Seattle, Wash.

Mills & Factories:
Chase Brass & Copper Co., Inc.
Lighting Fixture Dept.
Waterbury, Conn.
Chase Rolling Mills, Waterbury, Conn.
Waterbury Mfg. Co., Waterbury, Conn.
Chase Metal Wks., Waterbury, Conn.
Consolidated Safety Pin Co., Bloomfield, N. J.

Cherry-Burrell Corp

Branch Plants:
Cedar Rapids, Iowa
Little Falls, N. Y.
Milwaukee, Wis.
Baltimore, Md.

Offices:
Pittsburgh, Pa.
New York, N. Y.
St. Paul, Minn.
Boston, Mass.
Philadelphia, Pa.
Cleveland, Ohio
Cincinnati, Ohio
Detroit, Mich.

Chester Dairy Supply Co.
Chester, Pa.

Branch:
A. M. Reid Creamery & Dairy Supply Co.
Philadelphia, Pa.

Chicago Railway Equipment Co. Chicago, Ill.	Branch Plant: Franklin, Pa.
Chicago Screw Co. Chicago, Ill.	Subsidiaries: Western Automatic Machine Co., Elyria, Ohio Hartford Machine Screw Co., Hartford, Conn. Detroit Screw Wks., Detroit, Mich.
Chromium Corp. of America New York City	Branch Plants: Milwaukee, Wisc. Waterbury, Conn. Cleveland, Ohio Chicago, Ill.
Cincinnati Sheet Metal & Roofing Co. Cincinnati, Ohio	(Subsidiary of Wierton Steel Co.)
C-K-R Co. Chicago, Ill	Branch Plants: Rittenhouse Plant, Akron, Ohio Cronk-Kohler Plant, Frankfort, N. Y.
Cleveland Chain & Mfg. Co. Cleveland, Ohio	Plants: Station D., Cleveland, Ohio Henry St., Cleveland, Ohio
Cleveland Tach Wks. Cleveland, Ohio	(Subsidiary of Bishop & Babcock Mfg. Co., Cleveland, Ohio)
Cleveland Wire Spring Co. Cleveland, Ohio	Plant: Cuyahoga Hts., Ohio
Coleman Bronze Div. Chicago, Ill.	(Subsidiary of Kawneer Co.)
Coleman Lamp & Stove Co. Wichita, Kansas	Branch: Sunshine Products Co. Chicago, Ill.
Consolidated Expanded Metal Co. Wheeling, W. Va.	Branches: Somerville, Mass. Buffalo, N. Y. Chicago, Ill. Cleveland, Ohio Detroit, Mich. Phila., Pa.

	Branches: (Cont'd) New York, N. Y. Pittsburgh, Pa. Beach Bottom, W. Va.
Corona Corp. Jersey City, N. J.	Sales Agency for Lightolier Co.
Creamery Package Mfg. Co Chicago, Ill.	Plants: Derby, Conn. Arlington Heights, Ill. Lake Mills, Wis. Ft. Atkinson, Wis.
Cyclone Fence Co.	Branches: Cleveland, Ohio Detroit, Mich. (Warehouse) Mineola, N. Y. De Kalb, Ill. Atlanta, Ga. Pittsburgh, Pa. Tecumsah, Mich. Greensburg, Ind. N. Chicago, Ill. Newark, N. J. Fort Worth, Texas
Davidson Enamel Products, Inc.	Branch Plants: Lima, Ohio Connersville, Ind.
Diamond Expansion Bolt Co. Carwood, N. J.	Branches: New York, N. Y. Phila., Pa. St. Louis, Mo. San Francisco, Calif. Chicago, Ill. Detroit, Mich. Los Angeles, Calif.
S. R. Droescher, Inc. New York City	Plant: Crawford, N. J.
Du Nex Incinerator Div. Cleveland, Ohio	(Subsidiary of Consolidated Iron-Steel Mfg. Co.)
Eagle Lock Co. New York City	Plant: Eagle Lock Company, Terryville, Conn.

Empire Flow Company Cleveland, Ohio	Associated Company of General Wheelbarrow Company of Cleveland, Ohio
Enamelers Guild, Inc. Pittsburgh, Penna.	Subsidiary of C. Hommel & Co.
Evans Products Co. Detroit, Mich.	Sales Organization for Lumber Products Corp.
Fairbanks Company New York City	District Offices: New York, N. Y. Boston, Mass. Pittsburgh, Penna. Branch Plants: St. Johnsbury, Vt. East Moline, Ill. Factories: Binghamton, N. Y. Rome, Ga.
Federal Screw Works Detroit, Mich.	Branch: Superior Screw & Bolt Manufacturing Co. Cleveland, Ohio
Florence Stove Co, Gardner, Mass.	Branch Factory: Kankakee, Ill. Sales Offices: New York, N. Y. Chicago, Ill. Atlanta, Ga. Detroit, Mich. Dallas, Texas San Francisco, Calif.
General Bronze Corp. Long Island City, N. Y.	Plants: Polachek Plant, Long Island City, N. Y. Roman Bronze Works Corona, Long Island, N. Y. Guarantee & Steel Co., Chicago, Ill.
General Metalware Co. (Main plant) Minneapolis, Minn.	Branch Plant: Portland, Oregon

W. A. Gibbs & Son, Inc. Chester, Pa.	Plant: Oneida, New York
Gilbert & Bennett Mfg. Co. (Main plant) Georgetown, Conn.	Branch Plant: Wireton, Blue Island, Illinois
Wm. Hodges & Co. Philadelphia, Penna.	Plant: Camden, New Jersey
Howe Scale Co. Rutland, Vt.	Subsidiary: Ohio Howe Scale Co. Cincinnati, Ohio.
Indestro Mfg. Corp. Chicago, Illinois	Subsidiary of Duro Metal Products Co.
Ivanhoe Division Miller Co. Meriden, Conn.	
Jensen Creamery Machinery Co. Oakland, Calif.	Branch of Bloomfield, N. J.
Edward Katsinger Co.	Branches: Edward Katzinger Co., Baltimore, Md. A. & J. Kitchen Tool Co., Chicago, Ill. Geneva Forge, Inc. Geneva, N. Y.
Kirsch Company, Inc. Sturgis, Michigan	Branches: New York City Boston, Mass. Oakland, Calif. St. Louis, Mo.
A. Leschen & Sons Rope Co.	Branch Offices: Chicago, Ill. Denver, Colo. New York, N. Y. San Francisco, Calif. Plant: St. Louis, Mo.
Lewis-Shepard Co. Watertown, Mass.	Branch: Crawfordsville, Ind.
Lisk Manufacturing Co., Ltd. Canandaigua, N. Y.	Plant: (Branch) Geneva Plant, Geneva, N. Y. Newark, N. Y.

Lowell Wrench Co. Worcester, Mass.	Subsidiaries: Safety Wrench & Appliance Co. Worcester, Mass. Warnock Mfg. Co. Worcester, Mass.
McKay Co. Pittsburgh, Penna.	Branch Plants: York, Penn. McKees Rocks, Penna.
Milcor Steel Co. Milwaukee, Wisconsin	Branch: Canton, Ohio
Mitchell-Vance, Inc. New York, N. Y.	Selling Agency for Shapiro & Aronson
P. H. Murphy Co. Chicago, Ill.	Branch Plants: Standard Railway Equipment Co. Railway Metal Products Co. Union Metal Products Co. (All located at Chicago, Ill.)
National Enameling & Stamping Co. Milwaukee, Wisc.	Branches: Laurel Hills, L. I., N. Y. Baltimore, Md. New Orleans, La. Granite City, Ill., Stamping Wks. Branch New York City Chicago, Ill.
National Lock Washer Co. Newark, N. J.	Branch Plant: Milwaukee, Wis.
Nicetown Mfg. Co. Philadelphia, Penna.	Subsidiaries: Philadelphia Lawn Mower Co. Paul & Beelman Mfg. Co. (same address in Phila.)
Nicholson File Co. Providence, R. I.	Factories: Arcade File Works, Anderson, Ind. G. & H. Barnett Div. Philadelphia, Penna. Paterson, N. J.
Noesting Pin Ticket Co., Inc. Mt. Vernon, N. Y.	Branch: Chicago, Ill.

Pennsylvania Stamping Corp. York, Penna.	Division: Pennsylvania Crate Co. Red Lion, Penna.
Perfection Stove Co. Cleveland, Ohio	Branches: Cleveland, Ohio Cleveland, Ohio Chicago, Ill. Kansas City, Mo. Omaha, Neb. Philadelphia, Penna. Brooklyn, N. Y. St. Paul, Minn. Boston, Mass. E. St. Louis, Ill. Albany, N. Y. Atlanta, Ga. Dallas, Texas Charlotte, N. C. Oakland, Calif. Los Angeles, Calif.
Petroleum Iron Works Co. of Texas (Office) New York City	Branch Office of Beaumont, Texas
The Pfaudler Co.	Branches: Rochester, N. Y. Elyria, Ohio New York, N. Y. Chicago, Ill. San Francisco, Calif.
Pittsburgh Steel Co. Pittsburgh, Penna.	Branches: San Francisco, Calif. Los Angeles, Calif. Atlanta, Ga. Chicago, Ill. Evansville, Ind. St. Louis, Mo. New York, N. Y. Monoseen, Penna. Philadelphia, Penna. Memphis, Tenn. Dallas, Texas Houston, Texas
Fayette R. Plumb, Inc. Philadelphia, Penna.	Branch Plant: St. Louis, Mo.

Progressive Service Co. St. Louis, Mo.	Branch Plant: Harrisburg, Penna.
Pyrene Mfg. Co. Newark, N. J.	Branch Plant: Newark, N. J.
Rheem Mfg. Co. Richmond, Calif.	Branch Plant: Southgate, Calif.
Revere Copper & Brass Co.	Branches: Rome Manufacturing Co. Div., Rome, N. Y. Dallas Division, Chicago, Ill.
Republic Steel Corp. Chicago, Ill.	Branch Plant: Upson Nut Division, Cleveland, Ohio
Robertson Rochester Corp. Rochester, N. Y.	Plant: Ferry, N. Y. Offices: New York, N. Y. Chicago, Ill. Los Angeles, Calif. Royal Rochester, Ind.
John A. Roebling's Sons Co. Trenton, N. J. (Main Plant)	Branch Offices: Chicago, Ill. Philadelphia, Pa. New York, N. Y. Birmingham, Ala. San Francisco, Calif. Los Angeles, Calif. Seattle, Wash. Portland, Oregon Atlanta, Ga. Denver, Colo. Boston, Mass. Cleveland, Ohio
Rockwell, Nordstull & Ward Bolt & Nut Co. Rock Falls, Ill.	Branch Plant: Port Chester, N. Y.

Scovill Mfg. Co. Waterbury, Conn.	Branch Offices: Boston, Mass. Providence, R. I. New York, N. Y. Phila. Penna. Atlanta, Ga. Syracuse, N. Y. Detroit, Mich. Chicago, Ill. Cincinnati, Ohio San Francisco, Calif. Los Angeles, Calif. Plants & Factories: American Pin Div., Waterbury, Conn. Morency-Van Buren Div., Sturgis, Mich. Oakville Co. Div., Waterbury, Conn. A. Schrader's Son, Inc., Brooklyn, N. Y. Hamilton Beach Mfg. Co., Racine, Wis. Plumbers' Brass Goods Div., Waterville, Conn.
Shapiro & Aronson New York City	Selling Agency: Mitchell-Vance, Inc.
Sheet Metal Specialty Pittsburgh, Penna.	Branch of same company at Follansbee, W. Va.
Snap-On Tools, Inc. Kenosha, Wis.	Branches: Albany, N. Y. Brooklyn, N. Y. Buffalo, N. Y. Chicago, Ill. Newark, N. J. Philadelphia, Penna. San Francisco, Calif. Cincinnati, Ohio Syracuse, N. Y. Toledo, Ohio Allston, Mass. Baltimore, Md. Richmond, Va. Atlanta, Ga. New York, N. Y. Seattle, Wash.

Stanley Works New Britain, Conn.	Branches: New Britain, Conn. Niles, Ohio Newark, N. J. (Atha Plant) Stanley Rule & Level Co., New Britain, Conn.
Steel & Tubes, Inc. Cleveland, Ohio	Branches: Detroit Works, Ferndale, Mich. Superior Works, Elyria, Ohio Brooklyn Works, Brooklyn, N. Y. Cleveland Works, Cleveland, Ohio Elyria Works, Elyria, Ohio General & Sales Offices: Cleveland, Ohio
Stewart Iron Works Co. Covington, Ky.	
Truscon Steel Co. (Main Plant) Youngstown, Ohio	Branch Offices: Buffalo, N. Y. Des Moines, Iowa Columbus, Ohio Chattanooga, Tenn. Chicago, Ill. Branch Factories: Pressed Steel Division, Cleveland, Ohio Berger Mfg. Co. Div., Canton, Ohio
Union Fork & Hoe Columbus, Ohio	Branch Plants: Continental Works Frankfort, N. Y.
United Shoe Machinery Boston, Mass.	Branch Plants: Die Plant - St. Louis, Mo. Beverly Factory, Beverly, Mass. Die Plant, Binghamton, N. Y.
United States Register Co. Battle Creek, Mich. (Main office & plant)	Branches: Minneapolis, Minn. Albany, N. Y. Kansas City, Mo. Denver, Colo.

Veeder Root, Inc. Hartford, Conn.	Branch: Bristol, Conn.
Vitreous Steel Products Co. Nappanee, Indiana	Branch of Cleveland, Ohio
Wackman Welded Ware Co. St. Louis, Mo.	Branches: Sand Springs, Okla., Section Line (Warehouse) Houston, Texas N. Kansas City, Mo. New Orleans, La.
Ware Bros. Chicago, Ill.	Trade Name of Chicago Roller Skate Co.
Washburn Co. Worcester, Mass.	Branches: Andrews Division, Rockford, Ill. Michigan Wire Goods Division, Niles, Michigan
Wheeling Steel Corp. Wheeling, W. Va.	Branch Plants: (1) La Belle Works, Wheeling, W. Va. (2) Ackerman Factory, Wheeling, W. Va. (3) Martins Ferry Factory, Martins Ferry, Ohio
Wickwire Spencer Steel Co. New York City	Branch Plants: Clinton Works - Clinton, Mass. Wickwire Works - Buffalo, N. Y. Morgan Works - Worcester, Mass. Goddard Works - Worcester, Mass. Palmer Works - Palmer, Mass.
Williamsport Wire Rope Co. Williamsport, Penna. (Main plant)	Branch Plant: Sparrows Point, Md. Warehouses & Branch Offices: Phila., Penna. Pittsburgh, Penna. Cleveland, Ohio New Orleans, La. Chattanooga, Tenn. Tulsa, Okla. Houston, Texas Chicago, Ill.

	Warehouses & Branch Offices: (Cont'd) Cincinnati, Ohio New York, N. Y. Blackwell, Okla. Odessa, Texas Tampa, Fla. Hobbs, New Mexico
Wilson & Bennett Mfg. Co. Chicago, Ill.	Branches: Jersey City, N. J. New Orleans, La.
Woodings Verona Tool Works Verona, Penna.	Plant:. Oakmont, Penna.
Yale & Towne Mfg. Co.	Branch Plants: Stamford, Conn. Division Phila., Penna. Division Walker-Automatic Div., Chicago, Ill. Saegar Lock Works, Chicago, Ill. Norton Door Closer Co., Chicago, Ill. Detroit Plant, Detroit, Mich. Walker Vehicle Co., Chicago, Ill. Barrows Lock Works, North Chicago, Ill.
M. M. Young & Co. Chicago, Ill.	Artforge, M. M. Young Co. (same concern)