

CHAPTER 7.—AUTOMOBILE ACCESSORY CHAINS

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AUTOMOBILE ACCESSORY CHAINS

INCLUDING TIRE CHAINS AND BATTERY CHAINS

INTRODUCTION

This report summarizes the operations of 67 tire chains, 9 battery chains, and 52 accessory chains which also sell tires and batteries. The report is based upon data received in 1930 in connection with the first national census of distribution.

The 128 chains reported herein operate 2,049 stores, with total sales (in 1929) of \$122,031,641, as follows:

	Number of chains	Number of units	Net sales (1929)
Automobile accessory chains.....	52	855	\$59,486,300
Tire chains.....	67	1,137	58,381,233
Battery chains.....	9	57	4,164,108
Total.....	128	2,049	122,031,641

AUTOMOBILE ACCESSORY CHAINS

Of the 52 accessory chains showing aggregate sales in 855 units of \$59,486,300, there are 34 local chains operating 189 units with sales of \$9,511,965 and 18 sectional and national chains operating 666 units with sales of \$49,974,335. Cities of more than 100,000 population have 353 units; 174 are in cities of 25,000 to 100,000, 138 are in cities of 10,000 to 25,000, and 190 are in places of less than 10,000 population.

The average unit of accessory chains shows annual sales of \$69,575 at an average operating expense of \$27.34 per \$100 of sales, of which pay roll is \$10.77. Of the 855 stores, 821 are in leased premises for which the cost of rent averages \$4 per \$100 of sales in such leased premises.

Growth of chains.—Classified as to age, 23.62 per cent of the units were established in 1929, 29.71 per cent were established in the four years of 1925 to 1928, inclusive, and nearly one-half were established prior to 1925.

Geographic distribution.—Of the 855 chain units, the East North-Central States, surrounding Chicago, contain 24.80 per cent. The Middle Atlantic States contain 19.42 per cent, while the West North-Central States contain 17.54 per cent. Next in order are the Pacific Coast States with 16.14 per cent and the West South-Central States with 6.08 per cent. Table 5B shows the distribution of units in other geographic divisions and further analyzes the data by size of chain.

In Table 2 a geographic analysis of the total sales of \$59,486,300 shows that those chains in the Chicago area which represent the greatest number of units also lead with sales of \$15,406,258. The Middle Atlantic States with sales of \$8,991,473, and the West North-Central States with sales of \$9,551,333, although surpassing the Pacific Coast States in respect to total number of units, fall

behind the Pacific coast sales of \$11,056,086. The fact that all but three of the stores in the latter are more than five years old, while between 40 and 50 of the stores in each of the other divisions were established in 1929, may explain in some measure the inconsistency between sales and units. The table also shows the distribution of sales in the other geographic divisions and further analyzes the data by size of chain. Table 7 shows similar information in more detail by size of city.

Credit operations.—Although only 15 chains report that they extend credit, they operate 55.32 per cent of the total number of units, and they do 64.36 per cent of the total business of all the accessory chains. They operate 473 stores, with aggregate sales of \$38,283,228, of which 6.53 per cent, or \$2,500,305, is credit business. These chains operate at an average expense of \$28.29 per \$100 of sales, of which \$10.76 is pay roll and \$3.96 is rent. The sales per store are somewhat higher than the average of chain stores, which do not give credit, averaging \$80,937.

Commodities sold by accessory chains.—Automotive parts and accessories (except tires, tubes, and batteries) constitute nearly 56 per cent of total sales of all chains in the accessory store classification. Tires, tubes, and tire accessories represent the substantial total of 21½ per cent and batteries constitute about 5 per cent. A list of the commodities is shown in Table 6.

TIRE CHAINS

Of the 67 tire chains showing aggregate sales in 1,137 units of \$58,381,233, 50 are local chains operating 329 units with sales of \$18,009,685 and 17 are sectional and national chains operating 808 units with sales of \$40,371,548. Many of the latter are manufacturer-controlled chains, each selling the product of some one manufacturer.

Cities of more than 100,000 population contain 519 units; 285 are in cities of 25,000 to 100,000, 214 are in cities of 10,000 to 25,000, and 119 are in places of less than 10,000 population. The average unit of tire chains shows annual sales of \$51,347.

Operating expenses.—The average store operating expense of the 1,137 chain units is \$30.68 per \$100 of sales, of which payroll is \$14.94. Rental cost in stores occupying leased premises is \$3.90 per \$100 of sales in such leased premises.

An expense comparison table herein indicates that the chains which extend credit operate at an average expense 3.22 per cent higher than do those selling entirely for cash. However, the difference is not a measure of the cost of credit so much as it is a segregation of the chains into two distinct classes according to the character of their business.

The chain offering credit could not drop 3.22 per cent from its expense ratio by withdrawing this service. If it did it would change the character of its business, would lose a large proportion of its present trade, and to maintain its volume it must succeed in attracting new trade of another type to replace it. As a rule the cash chain serves a different clientele than does the credit chain, and the two are not directly comparable.

A much greater difference in operating expense is caused by the size of city and the section of the country in which the chains operate. Of 42 chains which could be used for such an analysis (see Table 12) to show expenses by geographic divisions, the sharpest contrast is shown between 5 chains operating in the West North-Central Division at an average expense ratio of 26.37 per cent and 13 chains operating in the Middle Atlantic Division at an average expense ratio of

only 22 per cent. However, this comparison table should be used with reservations, because of the relatively few chains included, as only those operating entirely in one division could be used.

Growth of chains.—Of the 1,137 chain units classified as to age, 38.96 per cent were established in 1929, 24.45 per cent were established in the four years of 1925 to 1928, inclusive, and 36.59 per cent of all the units operating at the end of 1929 were established prior to 1925. These figures reflect the state of disorganization which existed in the tire business toward the end of 1928 and in 1929, with the great increase in tire sales by other kinds of retailers than tire shops, and the ill-planned effort of several tire manufacturers to establish chains of manufacturer-controlled retail stores to meet the new form of competition.

The successful operation of retail stores requires much more than expensive locations and large stocks of tires, as these manufacturers soon found out. Their costly lesson is reflected in the abnormally high expense ratios shown in those sections of the country in which their activities were concentrated, and in the expenses shown in Table 11 for chains of more than 25 units. The high rental ratios shown herein are above normal because of the high-pressure competition at that time for supposedly desirable locations, some of the new manufacturer-controlled chains showing a rental cost as high as 25 per cent of sales.

Geographic distribution.—Of the 1,137 chain units analyzed, the East North-Central States, surrounding Chicago, contain 18.91 per cent. The Middle Atlantic States contain 17.94 per cent, while the Pacific Coast States contain 16.80 per cent. Next in order are the West North-Central States with 13.81 per cent and the South Atlantic States with 11.08 per cent. Table 15 shows the distribution of stores in other geographic divisions and further divides the data by size of chain.

In Table 9 a geographic analysis of the total sales of \$58,381,233 shows that those chains in the Chicago area which represent the greatest number of units also lead in sales with a total of \$12,798,679. The Pacific Coast States, though ranking third in number of units, rank second in sales with \$10,463,019, while the Middle Atlantic States are a close third with \$10,374,008. The table also shows the distribution of sales in the other geographic divisions and further divides this data by size of chain. Table 15 shows this same information in more detail by size of city.

Credit operations.—Credit is extended by 38 chains operating 63.94 per cent of the total number of units, and they do 80.88 per cent of the total business of all the tire chains. They operate 727 stores with aggregate sales of \$47,217,844, of which 17.54 per cent, or \$8,282,795, is credit business. These chains operate at an average expense of \$31.30 per \$100 of sales, of which \$15.29 is pay roll and \$3.84 is rent. The sales per store are considerably higher than the average of chains which do not give credit, averaging about \$65,000.

Commodities sold by tire chains.—Tires and tubes constitute about two-thirds of total sales of all tire chains. Gasoline adds 12 per cent, while automotive parts and accessories add about 5 per cent. A list of the other commodities is shown in Table 14.

BATTERY CHAINS

There are 9 battery chains operating 57 units with sales of \$4,164,108. Of this number 7 are local chains operating 38 units with sales of \$1,046,662, and 2 are sectional and national chains with 19 units doing \$3,117,446. With the exception of the East South-Central and Mountain States, all of the geographic divisions of the country are represented.

The average operating expense of battery chains is \$35.78 per \$100 of sales, of which pay roll is \$18.38. Of the 57 units all but one are in leased premises for which the cost of rent averages \$4.15 per \$100 of sales.

Only four chains report that they extend credit, and they do less than 15 per cent of the total sales of all battery shop chains. They operate 21 stores, with aggregate sales of \$588,509, of which 36.84 per cent, or \$126,377, is credit business.

Batteries constitute more than 80 per cent of total sales of all battery chains. Repairs and service add 14.64 per cent and parts 3.6 per cent. A list of commodities is shown in Table 17.

TABLE 1.—SUMMARY—ACCESSORY CHAINS

Total, accessory chains.....	52
Number of local chains.....	34
Number of sectional and national chains.....	18
Total units.....	855
Local.....	189
Sectional and national.....	666
Total net sales (1929).....	\$50,486,300
Credit sales.....	2,500,305
Store-operating expenses (per \$100 of sales).....	27.34
Pay-roll cost, 4,353 employees (per \$100 of sales).....	10.77
Other store-operating expenses, including rent (per \$100 of sales).....	16.57
Rent, 821 leased stores (per \$100 of sales).....	4.00

TABLE 2.—SALES CLASSIFIED BY SIZE OF CHAIN—ACCESSORY CHAINS

[An (x) indicates that the amount must be withheld to avoid disclosure of individual operations]

A. SALES BY SIZE OF CITY

SIZE OF CITY	Total sales all chains	SALES OF STORES IN CHAINS OF—			
		More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
UNITED STATES, total.....	52 chains \$59,486,300	5 chains \$39,283,564	9 chains \$9,476,297	11 chains \$3,809,768	27 chains \$6,916,671
All cities having population of—					
More than 100,000.....	35,149,297	22,343,692	5,447,925	2,433,603	4,923,877
25,000 to 100,000.....	10,134,893	6,207,136	2,121,605	1,036,632	769,520
10,000 to 25,000.....	6,901,326	5,123,146	1,025,912	180,331	591,937
Less than 10,000.....	7,300,784	5,609,390	880,855	179,202	631,337

B. SALES BY GEOGRAPHIC DIVISIONS

[For number of units, see Table 5 B]

UNITED STATES, total.....	\$59,486,300	\$39,283,564	\$9,476,297	\$3,809,768	\$6,916,671
New England.....	1,595,361	1,039,601	(x)	—	497,615
Middle Atlantic.....	8,991,473	3,074,572	2,633,328	1,239,683	2,043,890
East North Central.....	15,406,258	7,578,902	3,755,605	1,445,222	2,626,529
West North Central.....	9,551,333	7,535,268	946,442	231,854	837,769
South Atlantic.....	3,152,628	2,427,359	201,554	261,945	261,770
East South Central.....	2,016,663	1,121,835	285,000	587,331	22,497
West South Central.....	5,296,112	3,331,344	1,596,223	—	368,545
Mountain.....	2,420,386	2,420,386	—	—	—
Pacific.....	11,056,086	10,754,297	—	(x)	258,056

TABLE 2.—SALES CLASSIFIED BY SIZE OF CHAIN—ACCESSORY CHAINS—Contd.

[An (x) indicates that the sales must be withheld to avoid disclosure of individual operations]

C. SALES BY TYPES OF OPERATION

	Total, all chains	CHAINS OF—			
		More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
ALL TYPES					
Number of chains.....	52	5	9	11	27
Number of units.....	855	515	139	80	121
Net sales (1929).....	\$59,486,300	\$39,283,564	\$9,476,297	\$3,809,768	\$6,916,671
Per cent of net sales.....	100.00	66.04	15.93	6.40	11.63
Average sales per unit.....	\$69,575	\$76,279	\$68,175	\$47,622	\$57,163
LOCAL CHAINS					
Number of chains.....	34		2	9	23
Number of units.....	189		22	64	103
Net sales (1929).....	\$9,511,965		(x)	\$2,441,484	\$5,210,065
SECTIONAL CHAINS					
Number of chains.....	15	4	6	1	4
Number of units.....	378	252	101	7	18
Net sales (1929).....	\$18,794,603	\$10,419,178	\$6,022,773	(x)	\$1,706,606
NATIONAL CHAINS					
Number of chains.....	3	1	1	1	
Number of units.....	288	263	16	9	
Net sales (1929).....	\$31,179,732	(x)	(x)	(x)	

D. SALES BY VOLUME

VOLUME OF SALES	Per cent of total sales	TOTAL SALES, ALL CHAINS				SALES OF STORES IN CHAINS OF—	
				More than 25 units			
		Number of chains	Net sales (1929)	Number of chains	Net sales (1929)	Number of chains	Net sales (1929)
UNITED STATES, total.....	100.00	52	\$59,486,300	5	\$39,283,564		
Chains with sales of—							
More than \$2,500,000.....	61.53	3	36,600,762	3	36,600,762		
\$1,000,000 to \$2,500,000.....	15.60	6	9,279,796	1	(x)		
\$500,000 to \$1,000,000.....	12.07	10	7,179,149	1	(x)		
\$250,000 to \$500,000.....	5.05	9	3,007,057				
\$100,000 to \$250,000.....	5.04	18	2,995,851				
Less than \$100,000.....	.71	6	423,685				
VOLUME OF SALES	SALES OF STORES IN CHAINS OF—						
	11 to 25 units		6 to 10 units		Less than 6 units		
	Number of chains	Net sales (1929)	Number of chains	Net sales (1929)	Number of chains	Net sales (1929)	
UNITED STATES, total.....	9	\$9,476,297	11	\$3,809,768	27	\$6,916,671	
Chains with sales of—							
More than \$2,500,000.....							
\$1,000,000 to \$2,500,000.....	4	6,118,776			1	(x)	
\$500,000 to \$1,000,000.....	4	3,196,049	2	(x)	3	1,923,519	
\$250,000 to \$500,000.....			5	1,820,087	4	1,186,970	
\$100,000 to \$250,000.....	1	(x)	3	565,836	14	2,268,543	
Less than \$100,000.....			1	(x)	5	363,124	

TABLE 3.—CREDIT AND INSTALLMENT SALES—ACCESSORY CHAINS

SIZE CLASS	Number of chains reporting credit sales	Total net sales in chains reporting credit	CREDIT SALES				CASH SALES	
			Open account		Installment		Amount	Per cent of sales
			Amount	Per cent of sales	Amount	Per cent of sales		
All chains which extend credit, total.....	15	\$38, 283, 228	\$2, 269, 959	5. 93	\$230, 346	0. 60	\$35, 782, 923	93. 47
Chains having—								
More than 50 units.....	3	33, 660, 697	1, 495, 380	4. 44	30, 812	. 09	32, 134, 505	95. 47
6 to 50 units.....	4	2, 875, 886	154, 293	5. 36	199, 534	6. 94	2, 522, 059	87. 70
Less than 6 units.....	8	1, 746, 645	620, 286	35. 51	-----	-----	1, 126, 359	64. 49

TABLE 4.—OPERATING EXPENSES—ACCESSORY CHAINS

	TOTAL, ALL CHAINS	EXPENSES OF STORES IN CHAINS OF—			
		More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
Net sales (1929).....	\$59, 486, 300	\$39, 283, 564	\$9, 476, 297	\$3, 809, 768	\$6, 916, 671
Number of chains.....	52	5	9	11	27
Units operated by local chains.....	189	-----	22	64	103
Sectional chains.....	378	252	101	7	18
National chains.....	288	263	16	9	-----
Operating expenses—total.....	\$16, 262, 525	\$10, 579, 448	\$2, 349, 889	\$1, 033, 454	\$2, 294, 734
Per \$100 of sales.....	27. 34	26. 93	24. 80	27. 26	33. 18
Pay roll, total.....	\$6, 405, 287	\$3, 852, 152	\$888, 104	\$440, 031	\$1, 225, 000
Per \$100 of sales.....	10. 77	9. 81	9. 37	11. 55	17. 71
Other store operating expenses, including rent.....	\$9, 857, 238	\$6, 727, 296	\$1, 461, 785	\$598, 423	\$1, 069, 734
Per \$100 of sales.....	16. 57	17. 12	15. 43	15. 71	15. 47
Rent in 821 leased premises, per \$100 of sales in such leased premises (included in figures on above line).....	4. 00	3. 78	3. 95	5. 19	4. 78
Stocks on hand, end of year, at cost.....	\$10, 595, 720	\$6, 526, 107	\$1, 251, 731	\$772, 398	\$2, 045, 484
EMPLOYMENT DATA					
Full-time employees—total.....	4, 247	2, 648	590	297	712
Men.....	3, 882	2, 444	539	276	623
Women.....	365	204	51	21	89
Total pay roll.....	\$6, 380, 817	\$3, 841, 569	\$886, 976	\$433, 954	\$1, 218, 318
Part-time employees—total.....	106	54	5	29	18
Men.....	88	54	5	11	18
Women.....	18	-----	-----	18	-----
Total pay roll.....	\$24, 470	\$10, 583	\$1, 128	\$6, 077	\$6, 682

NOTE.—This computation of expenses includes no return on capital invested in merchandise, fixtures, or accounts. Expenses do not include, of course, the cost of merchandise sold nor profit.

TABLE 5.—CHAIN UNITS CLASSIFIED BY DATE OF ESTABLISHMENT, SIZE OF CHAINS, AND GEOGRAPHIC DIVISIONS—ACCESSORY CHAINS

A. BY DATE OF ESTABLISHMENT

DATE OF ESTABLISHMENT	Per cent of total units	Total units, all chains	UNITS IN CHAINS OF—			
			More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
Total, all units.....	100.00	855	515	139	80	121
All units established:						
In 1929.....	23.62	202	135	24	19	24
1925 to 1928.....	29.71	254	122	60	34	38
Previous to 1925.....	46.67	399	258	55	27	59

B. UNITS BY GEOGRAPHIC DIVISIONS

[For dollar figures, see Table 2B]

UNITED STATES, total.....	100.00	855	515	139	80	121
DIVISION						
New England.....	4.09	35	21	1		13
Middle Atlantic.....	19.42	166	65	32	32	37
East North Central.....	24.80	212	116	48	25	23
West North Central.....	17.54	150	99	21	2	28
South Atlantic.....	4.91	42	28	4	8	2
East South Central.....	3.04	26	5	7	12	2
West South Central.....	6.08	52	14	26		12
Mountain.....	3.98	34	34			
Pacific.....	16.14	138	133		1	4

TABLE 6.—SALES BY COMMODITIES—ACCESSORY CHAINS

Total net sales, all chains (1929).....	\$59,486,300
Less amount which can not be broken down into commodities.....	12,405,524
Sales further analyzed.....	47,080,776
	<i>Per cent</i>
Commodities.....	100.00
Automotive parts and accessories (except tires, tubes, and batteries).....	55.94
Batteries.....	4.78
Electrical appliances.....	.02
Gasoline.....	.76
Hardware.....	.10
Motor cycles, bicycles, and accessories.....	.03
Oils and greases.....	2.13
Radios and radio equipment.....	5.84
Repairs and service.....	.84
Sales to other dealers.....	.54
Sporting goods.....	.07
Tires, tubes, and tire accessories.....	21.53
Trailers.....	3.38
Used automotive parts and accessories.....	.27
Used cars and trucks.....	.30
Miscellaneous commodities.....	3.47

TABLE 7.—SALES CLASSIFIED BY SIZE OF CHAINS AND SIZE OF CITY, IN EACH GEOGRAPHIC DIVISION—ACCESSORY CHAINS

DIVISION AND SIZE OF CITY	Per cent of total sales	Total sales, all chains	SALES OF STORES IN CHAINS OF—			
			More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
UNITED STATES, total.....	100.00	\$59,486,300	\$39,283,564	\$9,476,297	\$3,809,768	\$6,916,671
All cities having population of—						
More than 100,000.....	59.09	35,149,297	22,343,892	5,447,925	2,433,603	4,923,877
25,000 to 100,000.....	17.04	10,134,893	6,207,136	2,121,605	1,036,632	769,520
10,000 to 25,000.....	11.60	6,901,326	5,123,146	1,025,912	160,331	591,937
Less than 10,000.....	12.27	7,300,784	5,609,390	880,855	179,202	631,337
NEW ENGLAND.....	100.00	1,595,361	1,039,601	58,145	-----	497,615
Cities having population of—						
More than 100,000.....	73.52	1,172,880	753,580	58,145	-----	361,155
25,000 to 100,000.....	26.08	416,117	286,021	-----	-----	130,096
10,000 to 25,000.....	.40	6,364	-----	-----	-----	6,364
Less than 10,000.....	-----	-----	-----	-----	-----	-----
MIDDLE ATLANTIC.....	100.00	8,991,473	3,074,572	2,633,328	1,239,683	2,043,890
Cities having population of—						
More than 100,000.....	76.00	6,833,004	2,623,532	1,855,267	711,317	1,642,888
25,000 to 100,000.....	15.48	1,391,948	316,823	415,748	456,877	202,500
10,000 to 25,000.....	7.06	635,130	113,285	316,735	53,811	151,299
Less than 10,000.....	1.46	131,391	20,932	45,578	17,678	47,203
EAST NORTH CENTRAL.....	100.00	15,406,258	7,578,902	3,755,605	1,445,222	2,626,529
Cities having population of—						
More than 100,000.....	65.23	10,050,093	4,775,365	2,094,629	977,281	2,202,813
25,000 to 100,000.....	17.47	2,690,700	1,238,983	804,497	345,817	301,403
10,000 to 25,000.....	9.31	1,434,640	773,210	504,099	100,416	56,915
Less than 10,000.....	7.99	1,230,825	791,344	352,380	21,708	65,393
WEST NORTH CENTRAL.....	100.00	9,551,333	7,535,268	946,442	231,854	837,769
Cities having population of—						
More than 100,000.....	44.95	4,293,000	3,333,690	430,844	231,854	296,612
25,000 to 100,000.....	12.75	1,217,640	803,900	377,895	-----	35,845
10,000 to 25,000.....	15.42	1,473,097	1,261,234	17,199	-----	194,664
Less than 10,000.....	26.88	2,567,596	2,136,444	120,504	-----	310,643
SOUTH ATLANTIC.....	100.00	3,152,628	2,427,359	201,554	261,945	261,770
Cities having population of—						
More than 100,000.....	90.57	2,855,473	2,289,083	184,620	120,000	261,770
25,000 to 100,000.....	4.71	148,413	104,479	16,934	27,000	-----
10,000 to 25,000.....	1.27	39,901	33,797	-----	6,104	-----
Less than 10,000.....	3.45	108,841	-----	-----	108,841	-----
EAST SOUTH CENTRAL.....	100.00	2,016,663	1,121,835	285,000	587,331	22,497
Cities having population of—						
More than 100,000.....	78.41	1,581,253	1,121,835	110,000	349,418	-----
25,000 to 100,000.....	16.46	331,938	-----	125,000	206,938	-----
10,000 to 25,000.....	1.24	25,000	-----	25,000	-----	-----
Less than 10,000.....	3.89	78,472	-----	25,000	30,975	22,497
WEST SOUTH CENTRAL.....	100.00	5,296,112	3,331,344	1,596,223	-----	368,545
Cities having population of—						
More than 100,000.....	64.41	3,411,013	2,696,593	714,420	-----	-----
25,000 to 100,000.....	19.19	1,016,536	634,751	381,531	-----	254
10,000 to 25,000.....	6.53	345,574	-----	162,879	-----	182,695
Less than 10,000.....	9.87	522,989	-----	337,393	-----	185,596
MOUNTAIN.....	100.00	2,420,386	2,420,386	-----	-----	-----
Cities having population of—						
More than 100,000.....	14.89	360,370	360,370	-----	-----	-----
25,000 to 100,000.....	33.03	799,400	799,400	-----	-----	-----
10,000 to 25,000.....	28.41	687,705	687,705	-----	-----	-----
Less than 10,000.....	23.67	572,911	572,911	-----	-----	-----
PACIFIC.....	100.00	11,056,086	10,754,297	-----	43,733	258,056
Cities having population of—						
More than 100,000.....	41.54	4,592,211	4,389,844	-----	43,733	158,634
25,000 to 100,000.....	19.19	2,122,201	2,022,779	-----	-----	99,422
10,000 to 25,000.....	20.39	2,253,915	2,253,915	-----	-----	-----
Less than 10,000.....	18.88	2,087,759	2,087,759	-----	-----	-----

TABLE 8.—SUMMARY—TIRE CHAINS

Total number of tire chains.....	67
Number of local chains.....	50
Number of sectional and national chains.....	17
Total units.....	1,137
Local.....	329
Sectional and national.....	808
Total net sales (1929).....	\$58,381,233
Credit sales.....	8,282,795
Store operating expenses (per \$100 of sales).....	30.68
All cash chains (per \$100 of sales).....	28.08
Credit-granting chains (per \$100 of sales).....	31.30
Pay-roll cost, 6,993 employees (per \$100 of sales).....	14.94
All cash chains, 5,833 employees (per \$100 of sales).....	13.45
Credit-granting chains, 1,160 employees (per \$100 of sales).....	15.29
Other store operating expenses, including rent (per \$100 of sales).....	15.74
All cash chains (per \$100 of sales).....	14.63
Credit-granting chains (per \$100 of sales).....	16.01
Rent, 1,062 leased premises (per \$100 of sales in such premises).....	3.90
All cash chains, 391 leased premises (per \$100 of sales in such leased premises).....	4.15
Credit-granting chains, 671 leased premises (per \$100 of sales in such leased premises).....	3.84

TABLE 9.—SALES CLASSIFIED BY SIZE OF CHAINS—TIRE CHAINS

A. SALES BY SIZE OF CITY

	Total sales, all chains	SALES OF STORES IN CHAINS OF—			
		More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
UNITED STATES, total.....	67 chains \$58,381,233	7 chains \$36,936,525	12 chains \$8,169,440	14 chains \$4,970,639	54 chains \$8,304,629
All cities with population of—					
More than 100,000.....	35,786,430	21,181,646	5,812,059	3,606,984	5,185,741
25,000 to 100,000.....	13,484,923	9,974,856	908,321	597,457	2,004,289
10,000 to 25,000.....	5,853,332	4,021,175	753,982	544,224	533,951
Less than 10,000.....	3,256,548	1,758,848	695,078	221,974	580,648

B. SALES BY GEOGRAPHIC DIVISIONS

[For number of units, see Table 13B]

UNITED STATES, total.....	\$58,381,233	\$36,936,525	\$8,169,440	\$4,970,639	\$8,304,629
DIVISION					
New England.....	2,893,302	1,942,091	754,738	-----	196,473
Middle Atlantic.....	10,374,008	5,509,621	1,209,573	634,820	3,019,994
East North Central.....	12,798,679	9,529,483	631,383	1,026,450	1,611,363
West North Central.....	5,130,350	3,203,257	961,002	391,509	574,582
South Atlantic.....	7,046,334	6,121,850	47,502	234,527	642,455
East South Central.....	4,108,623	3,208,594	490,050	-----	409,979
West South Central.....	4,663,936	2,285,275	852,360	236,782	1,289,519
Mountain.....	902,982	852,283	50,699	-----	-----
Pacific.....	10,463,019	4,284,071	3,172,133	2,446,551	560,264

TABLE 9.—SALES CLASSIFIED BY SIZE OF CHAINS—TIRE CHAINS—Continued

C. SALES BY TYPES OF OPERATION

	Total, all chains	CHAINS OF—			
		More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
ALL TYPES					
Number of chains.....	67	7	12	14	34
Number of units.....	1,137	699	191	104	143
Net sales (1929).....	\$58,381,233	\$36,936,525	\$8,169,440	\$4,970,639	\$8,304,629
Per cent of net sales.....	100.00	63.27	13.99	8.51	14.23
Average sales per unit.....	\$51,347	\$52,842	\$42,772	\$47,795	\$58,074
LOCAL CHAINS					
Number of chains.....	50		8	12	30
Number of units.....	329		119	85	125
Net sales (1929).....	\$18,009,685		\$6,034,931	\$4,658,377	\$7,316,377
SECTIONAL CHAINS					
Number of chains.....	8		2	2	4
Number of units.....	76		39	19	18
Net sales (1929).....	\$3,039,771		\$1,739,257	\$312,262	\$988,252
NATIONAL CHAINS					
Number of chains.....	9	7	2		
Number of units.....	732	699	33		
Net sales (1929).....	\$37,331,777	\$36,936,525	\$395,252		

D. SALES BY VOLUME

	TOTAL			SALES OF STORES IN CHAINS OF—	
	Per cent of total sales	Number of chains	Net sales (1929)	More than 25 units	
				Number of chains	Net sales (1929)
UNITED STATES, total.....	100.00	67	\$58,381,233	7	\$36,936,525
Chains with sales of—					
More than \$5,000,000.....	58.19	3	33,972,742	3	33,972,742
\$1,000,000 to \$2,500,000.....	11.07	5	6,459,676	1	(x)
\$500,000 to \$1,000,000.....	11.95	9	6,975,625	2	(x)
\$250,000 to \$500,000.....	9.30	14	5,430,959		
\$100,000 to \$250,000.....	8.75	29	5,108,500	1	(x)
Less than \$100,000.....	.74	7	433,731		

	SALES OF STORES IN CHAINS OF—					
	11 to 25 units		6 to 10 units		Less than 6 units	
	Number of chains	Net sales (1929)	Number of chains	Net sales (1929)	Number of chains	Net sales (1929)
UNITED STATES, total.....	12	\$8,169,440	14	\$4,970,639	34	\$8,304,629
Chains with sales of—						
More than \$5,000,000.....						
\$1,000,000 to \$2,500,000.....	2	(x)	1	(x)	1	(x)
\$500,000 to \$1,000,000.....	5	\$3,999,121			2	(x)
\$250,000 to \$500,000.....	3	1,240,162	5	1,981,088	6	2,209,709
\$100,000 to \$250,000.....	2	(x)	8	1,483,186	18	3,182,415
Less than \$100,000.....					7	433,731

An (x) indicates the amount must be withheld to avoid disclosure of individual operations.

TABLE 10.—CREDIT AND INSTALLMENT SALES—TIRE CHAINS

SIZE CLASS	Number of chains reporting credit sales	Total net sales in chains reporting credit	CREDIT SALES				CASH SALES	
			Open account		Installment		Amount	Per cent of sales
			Amount	Per cent of sales	Amount	Per cent of sales		
All chains which extend credit, total.....	38	\$47,217,844	\$7,704,956	16.32	\$577,839	1.22	\$38,935,049	82.46
Chains having—								
More than 25 units.....	4	34,862,398	2,594,706	7.44			32,267,692	92.56
11 to 25 units.....	9	6,647,927	2,163,562	32.54	290,379	4.37	4,193,986	63.09
6 to 10 units.....	9	2,241,663	1,337,787	59.68	246,460	10.99	657,416	29.33
Less than 6 units.....	16	3,465,856	1,608,901	46.42	41,000	1.18	1,815,955	52.40

TABLE 11.—OPERATING EXPENSES—TIRE CHAINS

	Total, all chains	EXPENSES OF STORES IN CHAINS OF—			
		More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
Net sales (1929).....	\$58,381,233	\$36,936,525	\$8,169,440	\$4,970,639	\$8,304,629
Number of chains.....	67	7	12	14	34
Units operated by local chains.....	329		119	85	125
Units operated by sectional chains.....	76		39	19	18
Units operated by national chains.....	732	699	33		
Operating expenses ¹	\$17,913,585	\$12,425,492	\$2,213,466	\$1,271,689	\$2,002,938
Per \$100 of sales.....	30.68	33.64	27.09	25.58	24.12
Pay roll.....	\$8,722,554	\$6,333,513	\$904,353	\$634,773	\$849,915
Per \$100 of sales.....	14.94	17.15	11.07	12.77	10.24
Other store operating expenses, including rent.....	\$9,191,031	\$6,091,979	\$1,309,113	\$636,916	\$1,153,023
Per \$100 of sales.....	15.74	16.49	16.02	12.81	13.88
Rent in 1,062 leased premises, per \$100 of sales in such leased premises (Included in figures on above line).....	3.90	3.89	4.46	3.55	3.66
Stock on hand, end of year, at cost.....	\$9,012,178	\$6,003,837	\$1,155,698	\$840,382	\$1,012,261
EMPLOYMENT DATA					
Full-time employees.....	6,906	5,350	565	407	584
Men.....	6,526	5,073	542	383	528
Women.....	380	277	23	24	56
Total pay roll.....	\$8,698,388	\$6,323,779	\$897,643	\$632,135	\$844,831
Part-time employees.....	87	32	25	9	21
Men.....	78	31	20	7	20
Women.....	9	1	5	2	1
Total pay roll.....	\$24,166	\$9,734	\$6,710	\$2,638	\$5,084

¹ This computation of expenses includes no return on capital invested in merchandise, fixtures, or accounts. Expenses do not include, of course, the cost of merchandise sold nor profit.

TABLE 11B.—COMPARISON OF EXPENSES—TIRE CHAINS—CREDIT CHAINS VERSUS CASH CHAINS

	All tire chains	Credit-granting chains	All-cash chains
Number of chains.....	67	38	29
Number of units.....	1,137	727	410
Total sales.....	\$58,381,233	\$47,217,844	\$11,163,389
Total expense ratio.....	30.68	31.30	28.08
Pay roll expense ratio.....	14.94	15.29	13.45
Rental expense ratio.....	3.90	3.84	4.15

TABLE 12.—EXPENSES BY GEOGRAPHIC DIVISIONS—TIRE CHAINS¹

[Sectional and local chains only]

DIVISION	Num-ber of chains	Num-ber of units	Net sales (1929)	OPERATING EXPENSES						STOCKS ON HAND, END OF YEAR, AT COST			
				Total reported ex-penses ¹		Num-ber of employ-ees	Pay roll		Other store operat-ing expenses (in-cluding rent)		Rent in 247 pre-mi-ised premises per \$100 of sales in such leased premises (in-cluded in fig-ures in prece-ding col-umn)		
				Amount	Per \$100 of sales		Amount	Per \$100 of sales	Amount			Per \$100 of sales	
Total ²	3 42	270	1 \$16, 178, 700	\$3, 957, 056	24. 21	1, 081	\$1, 682, 420	10. 48	\$2, 274, 636	13. 73	3. 37	\$2, 192, 883	13. 35
Middle Atlantic.....	13	79	4, 286, 826	943, 089	22. 00	235	350, 707	8. 18	592, 382	13. 82	3. 59	698, 424	16. 29
East North Central.....	8	49	2, 818, 253	696, 774	24. 72	180	353, 576	12. 54	343, 198	12. 18	4. 23	306, 209	10. 87
West North Central.....	5	33	1, 564, 230	412, 465	26. 37	141	196, 316	12. 55	216, 149	13. 82	3. 09	293, 487	18. 76
West South Central.....	5	23	1, 479, 636	353, 398	23. 86	145	131, 497	8. 89	221, 901	14. 99	3. 86	135, 690	9. 17
Pacific.....	11	86	6, 029, 755	1, 551, 330	25. 73	380	650, 324	10. 79	901, 006	14. 94	2. 86	759, 073	12. 59

¹ This computation of expenses includes no return on capital invested in merchandise, fixtures, or accounts. Expenses do not include, of course, the cost of merchandise sold nor profit.

² To avoid disclosure of individual operations, no information is shown for divisions with less than 3 chains.

³ Only those chains located wholly in 1 geographic division were used in this table.

TABLE 13.—CHAIN UNITS CLASSIFIED BY DATE OF ESTABLISHMENT, SIZE OF CHAINS, AND GEOGRAPHIC DIVISIONS—TIRE CHAINS

A. BY DATE OF ESTABLISHMENT

DATE OF ESTABLISHMENT	Per cent of total units	Total units, all chains	UNITS IN CHAINS OF—			
			More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
Total, all units.....	100.00	1,137	699	191	104	143
All units established—						
In 1929.....	38.96	443	325	46	27	45
1925 to 1928.....	24.45	278	114	66	45	53
Previous to 1925.....	36.59	416	260	79	32	45

B. UNITS BY GEOGRAPHIC DIVISIONS

[For dollars of sales, see Table 9B]

UNITED STATES, total.....	100.00	1,137	699	191	104	143
DIVISION						
New England.....	5.10	58	31	23	-----	4
Middle Atlantic.....	17.94	204	110	31	21	42
East North Central.....	18.91	215	148	18	23	26
West North Central.....	13.81	157	107	25	6	19
South Atlantic.....	11.08	126	100	3	9	14
East South Central.....	6.24	71	54	13	-----	4
West South Central.....	8.71	99	46	26	10	17
Mountain.....	1.41	16	12	4	-----	-----
Pacific.....	16.80	191	91	48	35	17

TABLE 14.—SALES BY COMMODITIES—TIRE CHAINS

Total net sales (1929).....	\$58,381,233
Less amount which can not be broken down into commodities.....	10,105,273
Sales further analyzed.....	48,275,955

Commodities.....	Per cent
	100.00
Tires and tubes.....	66.98
Automotive parts and accessories.....	4.96
Batteries.....	3.12
Gasoline.....	12.00
Oils and greases.....	2.37
Radio sets.....	1.00
Radio parts and accessories.....	.13
Sales to other dealers.....	.35
Service.....	7.62
Miscellaneous commodities.....	1.47

TABLE 15.—SALES CLASSIFIED BY SIZE OF CHAIN, SIZE OF CITY, AND GEOGRAPHIC DIVISIONS—TIRE CHAINS

DIVISION AND SIZE OF CITY	Per cent of total sales	Total sales, all chains	SALES OF STORES IN CHAINS OF—			
			More than 25 units	11 to 25 units	6 to 10 units	Less than 6 units
UNITED STATES, total.....	100.00	\$58,381,233	\$36,936,525	\$8,169,440	\$4,970,639	\$8,304,629
All cities having population of—						
More than 100,000.....	61.30	35,786,430	21,181,646	5,812,059	3,606,984	5,185,741
25,000 to 100,000.....	23.10	13,484,923	9,974,856	908,321	597,457	2,004,289
10,000 to 25,000.....	10.02	5,853,332	4,021,175	753,982	544,224	533,951
Less than 10,000.....	5.58	3,256,548	1,758,848	695,078	221,974	580,648
NEW ENGLAND.....	100.00	2,893,302	1,942,091	754,738	-----	196,473
Cities having population of—						
More than 100,000.....	83.81	2,424,811	1,714,219	557,811	-----	152,781
25,000 to 100,000.....	14.81	428,499	187,880	196,927	-----	43,692
10,000 to 25,000.....	1.38	39,992	39,992	-----	-----	-----
Less than 10,000.....	-----	-----	-----	-----	-----	-----
MIDDLE ATLANTIC.....	100.00	10,374,008	5,509,621	1,209,573	634,820	3,019,994
Cities having population of—						
More than 100,000.....	70.19	7,281,300	4,206,571	792,587	316,545	1,965,597
25,000 to 100,000.....	15.79	1,638,253	745,651	275,329	76,802	540,471
10,000 to 25,000.....	9.08	941,489	461,056	51,304	209,397	219,732
Less than 10,000.....	4.94	512,966	96,343	90,353	32,076	294,194
EAST NORTH CENTRAL.....	100.00	12,798,679	9,529,483	631,383	1,026,450	1,611,363
Cities having population of—						
More than 100,000.....	66.78	8,546,600	5,556,800	631,383	947,334	1,411,083
25,000 to 100,000.....	22.02	2,818,454	2,683,058	-----	12,116	123,280
10,000 to 25,000.....	6.74	862,942	795,942	-----	67,000	-----
Less than 10,000.....	4.46	570,683	493,683	-----	-----	77,000
WEST NORTH CENTRAL.....	100.00	5,130,350	3,203,257	961,002	391,509	574,582
Cities having population of—						
More than 100,000.....	41.84	2,146,601	1,059,005	921,067	-----	166,529
25,000 to 100,000.....	35.25	1,808,293	1,313,848	-----	298,713	195,732
10,000 to 25,000.....	18.55	951,506	643,135	12,500	92,796	203,075
Less than 10,000.....	4.36	223,950	187,269	27,435	-----	9,246
SOUTH ATLANTIC.....	100.00	7,046,334	6,121,850	47,502	234,527	642,455
Cities having population of—						
More than 100,000.....	42.46	2,991,902	2,364,777	47,502	100,780	478,843
25,000 to 100,000.....	44.38	3,126,905	2,895,366	-----	107,427	124,112
10,000 to 25,000.....	8.31	585,344	568,174	-----	17,170	-----
Less than 10,000.....	4.85	342,183	293,533	-----	9,150	39,500
EAST SOUTH CENTRAL.....	100.00	4,108,623	3,208,594	490,050	-----	409,979
Cities having population of—						
More than 100,000.....	71.93	2,955,295	2,300,020	245,296	-----	409,979
25,000 to 100,000.....	5.98	245,614	245,614	-----	-----	-----
10,000 to 25,000.....	12.69	521,591	397,992	123,599	-----	-----
Less than 10,000.....	9.40	386,123	264,968	121,155	-----	-----
WEST SOUTH CENTRAL.....	100.00	4,663,936	2,285,275	852,360	236,782	1,289,519
Cities having population of—						
More than 100,000.....	26.59	1,240,222	1,014,616	-----	29,617	195,989
25,000 to 100,000.....	41.03	1,913,384	832,380	173,931	-----	907,073
10,000 to 25,000.....	17.90	834,813	322,320	412,074	26,417	74,002
Less than 10,000.....	14.48	675,517	115,959	266,355	180,748	112,455
MOUNTAIN.....	100.00	902,982	852,283	50,699	-----	-----
Cities having population of—						
More than 100,000.....	22.97	207,464	206,060	1,404	-----	-----
25,000 to 100,000.....	16.41	148,143	148,143	-----	-----	-----
10,000 to 25,000.....	43.49	392,670	373,375	19,295	-----	-----
Less than 10,000.....	17.13	154,705	124,705	30,000	-----	-----
PACIFIC.....	100.00	10,463,019	4,284,071	3,172,133	2,446,551	560,264
Cities having population of—						
More than 100,000.....	76.39	7,992,235	2,759,578	2,615,009	2,212,708	404,940
25,000 to 100,000.....	12.97	1,357,378	922,916	262,134	102,399	69,929
10,000 to 25,000.....	6.91	722,985	419,189	135,210	131,444	37,142
Less than 10,000.....	3.73	390,421	182,388	159,780	-----	48,263

TABLE 16.—SUMMARY—BATTERY CHAINS

Number of chains (local, sectional, and national).....	9
Units operated by local chains.....	38
Units operated by sectional chains.....	4
Units operated by national chains.....	15
Net sales (1929).....	\$4, 164, 108
Stocks on hand, end of year, at cost.....	\$315, 306
Expenses (total).....	\$1, 319, 672
Total operating expenses per \$100 of sales.....	35. 78
Pay roll.....	\$765, 180
Other operating expenses.....	\$554, 492
Rent, 56 leased units, per \$100 of sales.....	4. 15

EMPLOYMENT DATA

Full-time employees.....	495
Salaries and wages of full-time employees.....	\$764, 790
Part-time employees.....	2
Salaries and wages of part-time employees.....	\$390

TABLE 17.—SALES BY COMMODITIES—BATTERY CHAINS

Net sales (1929).....	\$4, 164, 108
Less amount which can not be broken down into commodities.....	589, 397
Sales further analyzed.....	3, 574, 711
	Per cent
Commodities.....	100. 00
Batteries.....	80. 64
Automotive parts and accessories.....	3. 60
Gasoline.....	. 65
Oils and greases.....	. 47
Repairs and service.....	14. 64