

UNITED STATES
DEPARTMENT OF COMMERCE
WASHINGTON

SURVEY OF CURRENT BUSINESS

NOVEMBER, 1928

No. 87



COMPILED BY

BUREAU OF THE CENSUS

IN COOPERATION WITH

BUREAU OF FOREIGN AND DOMESTIC COMMERCE

AND

BUREAU OF STANDARDS

IMPORTANT NOTICE

In addition to figures given from Government sources, there are also incorporated for completeness of service figures from other sources generally accepted by the trades, the authority and responsibility for which are noted in the "Sources of Data" on pages 139-142 of the August, 1928, semiannual issue

Subscription price of the SURVEY OF CURRENT BUSINESS is \$1.50 a year; single copies (monthly), 10 cents, semiannual issues, 25 cents. Foreign subscriptions, \$2.25; single copies (monthly issues), including postage, 14 cents; semiannual issues, 36 cents. Subscription price of COMMERCE REPORTS is \$4 a year; with the SURVEY, \$5.50 a year. Make remittances only to Superintendent of Documents, Washington, D. C., by postal money order, express order, or New York draft. Currency at sender's risk. Postage stamps or foreign money not accepted

INTRODUCTION

The SURVEY OF CURRENT BUSINESS is designed to present each month a picture of the business situation by setting forth the principal facts regarding the various lines of trade and industry. The figures reported are very largely those already in existence. The chief function of the department is to bring together these data which, if available at all, are scattered in hundreds of different publications. A portion of these data are collected by Government departments, other figures are compiled by technical journals, and still others are reported by trade associations.

At semiannual intervals detailed tables are published giving, for each item, monthly figures for the past two years and yearly comparisons, where available, back to 1913; also blank lines sufficient for six months have been left at the bottom of each table, enabling those who care to do so to enter new figures as soon as they appear (see August, 1928, issue). In the intervening months the more important comparisons only are given in the table entitled "Trend of business movements."

WEEKLY SUPPLEMENT

Realizing that current statistics are highly perishable and that to be of use they must reach the business man at the earliest possible moment, the department has arranged to distribute supplements every week to subscribers in the United States. The supplements are usually mailed on Saturdays and give such information as has been received during the week ending on the preceding Tuesday. The monthly information contained in these bulletins is republished in the SURVEY, and the supplements also contain charts and tables of weekly data.

RELATIVE AND INDEX NUMBERS

To facilitate comparison between different important items and to chart series expressed in different units, relative numbers (often called "index numbers," a term referring more particularly to a special kind of number described below) have been calculated. The monthly average for 1923-1925 has usually been used as a base equal to 100.

The relative numbers are computed by allowing the monthly average for the base year or period to equal 100. If the movement for a current month is greater than the base, the relative number will be greater than 100, and vice versa. The difference between 100 and the relative number will give at once the per cent increase or decrease compared with the base period. Thus a relative number of 115 means an increase of 15 per cent over the base period, while a relative number of 80 means a decrease of 20 per cent from the base.

Relative numbers may also be used to calculate the approximate percentage increase or decrease in a movement from one period to the next. Thus, if a relative number at one month is 120 and for a later month it is 144 there has been an increase of 20 per cent.

When two or more series of relative numbers are combined by a system of weightings, the resulting series is denominated an index number. The index number, by combining many relative numbers, is

designed to show the trend of an entire group of industries or for the country as a whole, instead of for the single commodity or industry which the relative number covers. Comparisons with the base year or with other periods are made in the same manner as in the case of relative numbers.

RATIO CHARTS

In most instances the charts used in the SURVEY OF CURRENT BUSINESS are of the type termed "Ratio Charts" (logarithmic scale), notably the Business Indicator charts on page 2. These charts show the percentage increase and allow direct comparisons between the slope of one curve and that of any other curve regardless of its location on the diagram; that is, a 10 per cent increase in an item is given the same vertical movement whether its curve is near the bottom or near the top of the chart. The difference between this and the ordinary arithmetic form of chart can be made clear by an example. If a certain item having a relative number of 400 in one month increases 10 per cent in the following month, its relative number will be 440, and on an ordinary chart would be plotted 40 equidistant scale points higher than the preceding months. Another movement with a relative number of, say, 50 also increases 10 per cent, making its relative number 55. On the ordinary (arithmetic) scale this item would rise only 5 equidistant points, whereas the previous item rose 40 points, yet each showed the same percentage increase. The ratio charts avoid difficulty and give to each of the two movements exactly the same vertical rise, and hence the slopes of the two lines are directly comparable. The ratio charts compare percentage changes, while the arithmetic charts compare absolute changes.

RECORD BOOK

As an aid to readers in comparing present data with monthly statistics in previous years, the department is compiling a RECORD BOOK OF BUSINESS STATISTICS, in which data now carried in the SURVEY OF CURRENT BUSINESS are shown by months as far back as 1909, if available. Full descriptions of the figures and reports of how the data are used in actual practice by business firms are contained in the RECORD BOOK. The sections covering textiles and metals have already been issued and may be obtained for 10 cents per copy from the Superintendent of Documents, Government Printing Office, Washington, D. C. (Do not send stamps.) Notices of other sections will be given in the SURVEY as they are issued.

METHODS OF USE

Methods of using and interpreting current business statistics have been collected by the department from many business concerns and are described in a booklet entitled "How to Use Current Business Statistics," together with methods of collecting statistics. This booklet may be obtained from the Superintendent of Documents, Government Printing Office, Washington D. C., at 15 cents per copy. (Do not send stamps.)

This issue presents practically complete data for the month of September and contains text covering the early weeks of October (page 1), for which the basic figures in table and chart form are presented regularly in the weekly supplements. As most data covering a particular month's business are not available until from 15 to 30 days after the close of the month, a complete picture of that month's operations can not be presented at an early date, but the weekly supplements give every week the latest data available.



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PRELIMINARY SUMMARY FOR OCTOBER

The volume of trade during the early weeks of October, as reflected by check payments, was greater than in the corresponding period of 1927. Activity in steel plants was on a higher scale than in either the previous month or the same month a year earlier. The value of new building contracts awarded during the first weeks of the month was higher than in the same period a year ago. Employment in Detroit factories, measuring in large degree the activity in the automobile industry, showed some recession from the previous month but was considerably higher than a year ago.

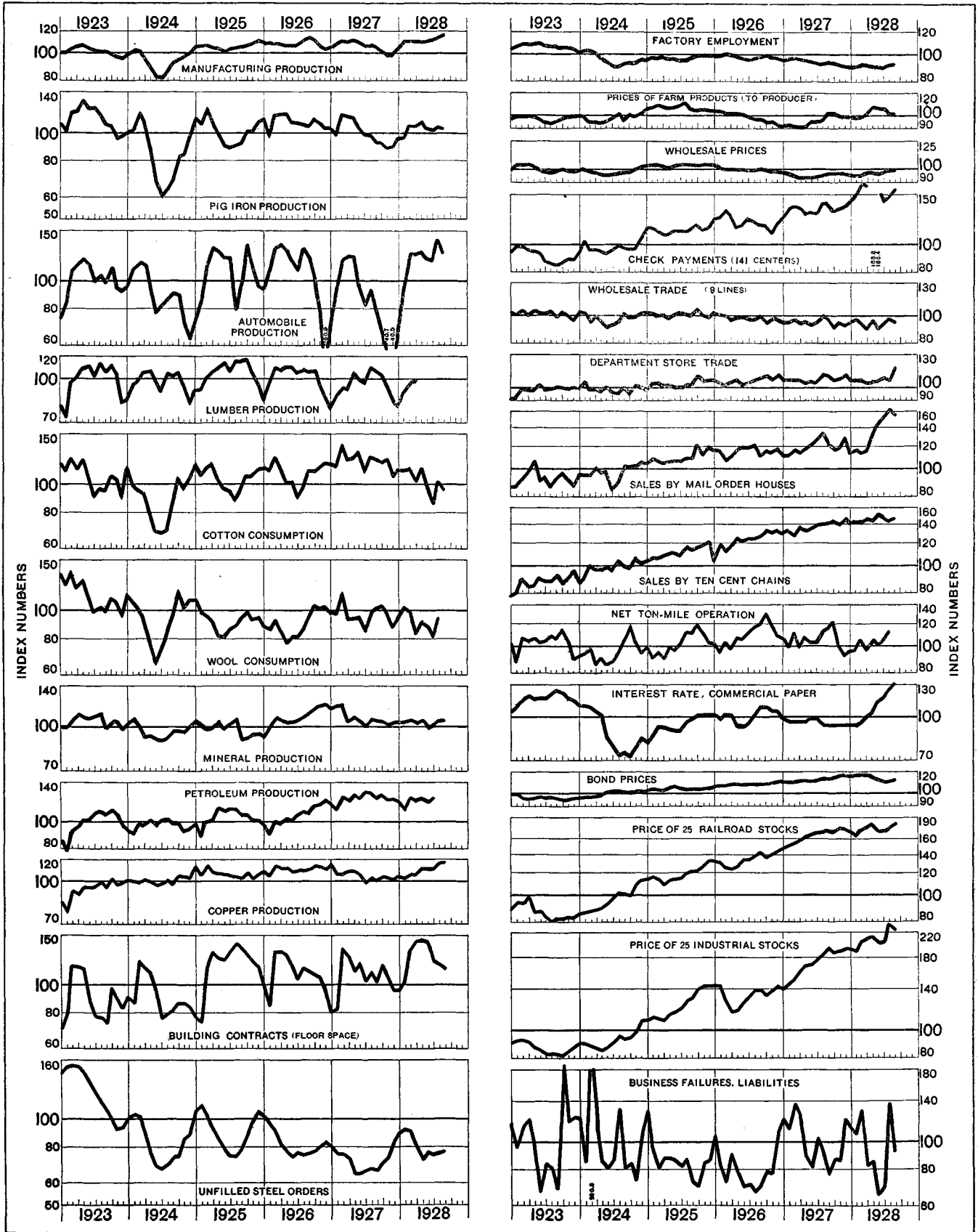
Loans and discounts of Federal reserve member banks were somewhat higher than in the previous month, showing an advance over the same month of last year, as well. Interest rates on time money showed very little change from the previous month but were higher than last year. Call loan rates averaged lower than in September but were higher than a year ago. Stock prices continued to average higher,

while bond prices, though showing no appreciable change from the previous month, were lower than a year ago, reflecting the effect of higher interest rates. Brokers' loans reached a new high point during October. The Federal reserve ratio showed only slight change from the previous month but was lower than a year ago.

The wholesale price index averaged somewhat lower than in September, but was still above the level which prevailed in October of last year. Prices for wheat averaged higher than a year ago. Cotton prices averaged higher than in either September or the corresponding month a year earlier. Iron and steel prices continued to recover and, for the first time in months, were higher than during the same period of the preceding year. Copper prices averaged higher than in either the previous month or October a year ago. Business failures were more numerous than in October a year ago.

MONTHLY BUSINESS INDICATORS, 1923-1928

[Ratio charts—see explanations on inside front cover. The curves on check payments, wholesale trade, sales of mail-order houses and 10-cent chains, and department stores have been adjusted for normal seasonal variations, and manufacturing production for the varying number of working days in the month as well]



BUSINESS CONDITIONS IN SEPTEMBER

PRODUCTION

Industrial production, after adjustment for seasonal conditions, was higher in September than at any other time on record. The principal gains over a year ago occurred in the output of automobiles, rubber tires, iron and steel, and cement, brick, and glass, while a decline from last year was registered in the production of textiles and lumber. Mineral production after adjustment for seasonal conditions showed gains over both the previous month and September a year ago, the principal increase over last year occurring in copper.

COMMODITY STOCKS

Stocks of commodities held at the end of September were higher than at the end of the previous month

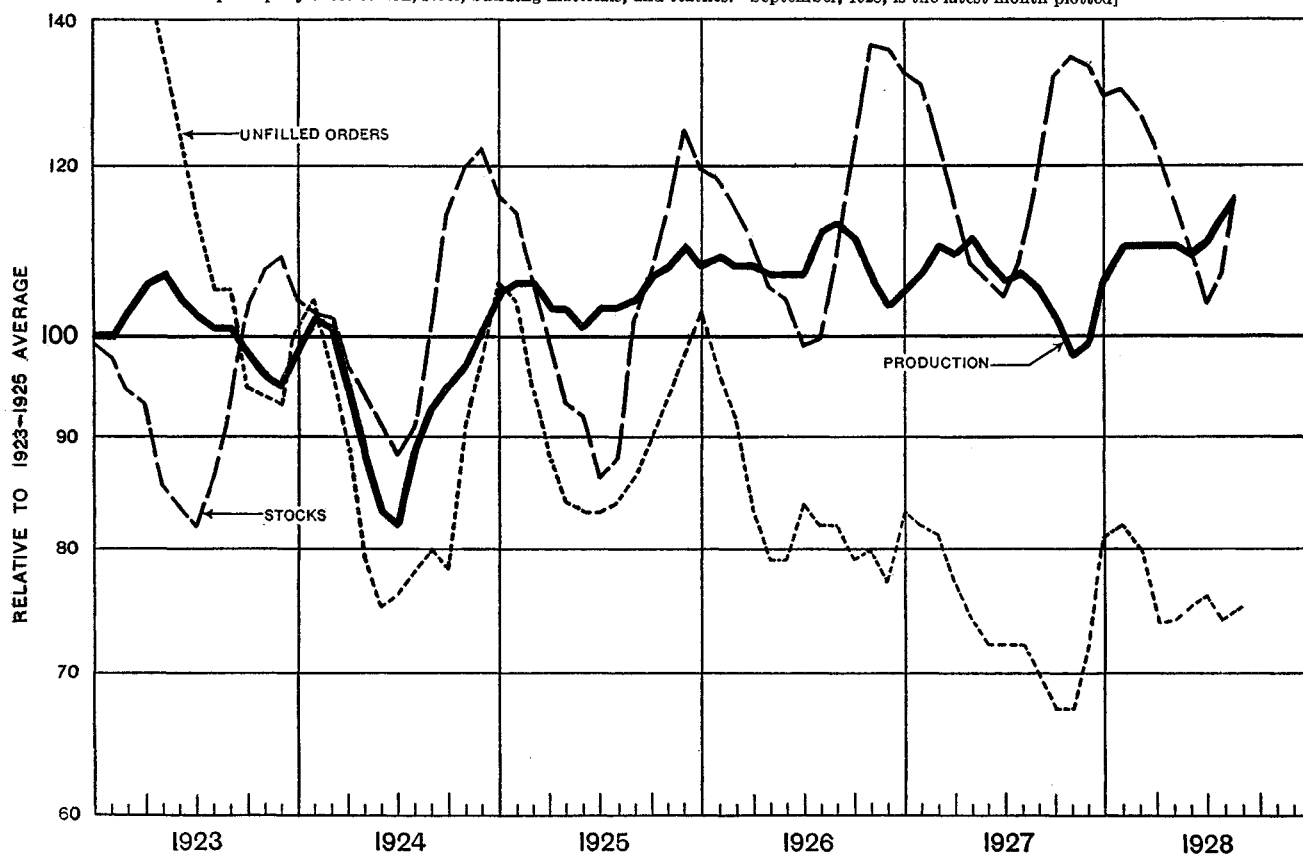
and lumber showed larger unfilled orders, while textiles and transportation equipment showed declines.

Wholesale trade in September, after adjustments for seasonal changes, showed a gain over the previous month, but a decline from a year ago. Compared with the preceding month, with no adjustments, all lines of wholesale trade showed gains except dry goods, men's clothing, women's clothing, and boots and shoes, which declined, and groceries, which showed no change. Contrasted with last year all lines showed smaller dollar sales, except meats and furniture, which showed substantial gains in volume.

Sales by department stores showed appreciable gains over both the previous month and September, 1927. Merchandise stocks held by department stores

PRODUCTION, STOCKS, AND UNFILLED ORDERS FOR MANUFACTURED COMMODITIES

[1923-1925 monthly average=100. Adjustment has been made for the seasonal movement and relative number of working days for production. Unfilled orders are principally those of iron, steel, building materials, and textiles. September, 1928, is the latest month plotted]



but showed a decline from a year ago, decreases from last year being registered both in raw materials and manufactured goods.

SALES

The general index of unfilled orders showed a gain over both the previous month and September of last year. Compared with August, unfilled orders for textiles were larger but forward business on the books of lumber mills and manufacturers of transportation equipment showed declines. As compared with a year ago iron and steel

at the end of the month were smaller than a year ago. Sales by mail-order houses were substantially larger than in either the preceding month or September of last year. The volume of business transacted by 10-cent chains was also greater than in either the previous month or the same period a year earlier. Grocery chains showed smaller dollar volumes than in August, but as compared with a year ago sales were larger. Reports from shoe, wearing apparel, and cigar chains showed larger business than in August, while candy and drug chains showed declines.

PRICES

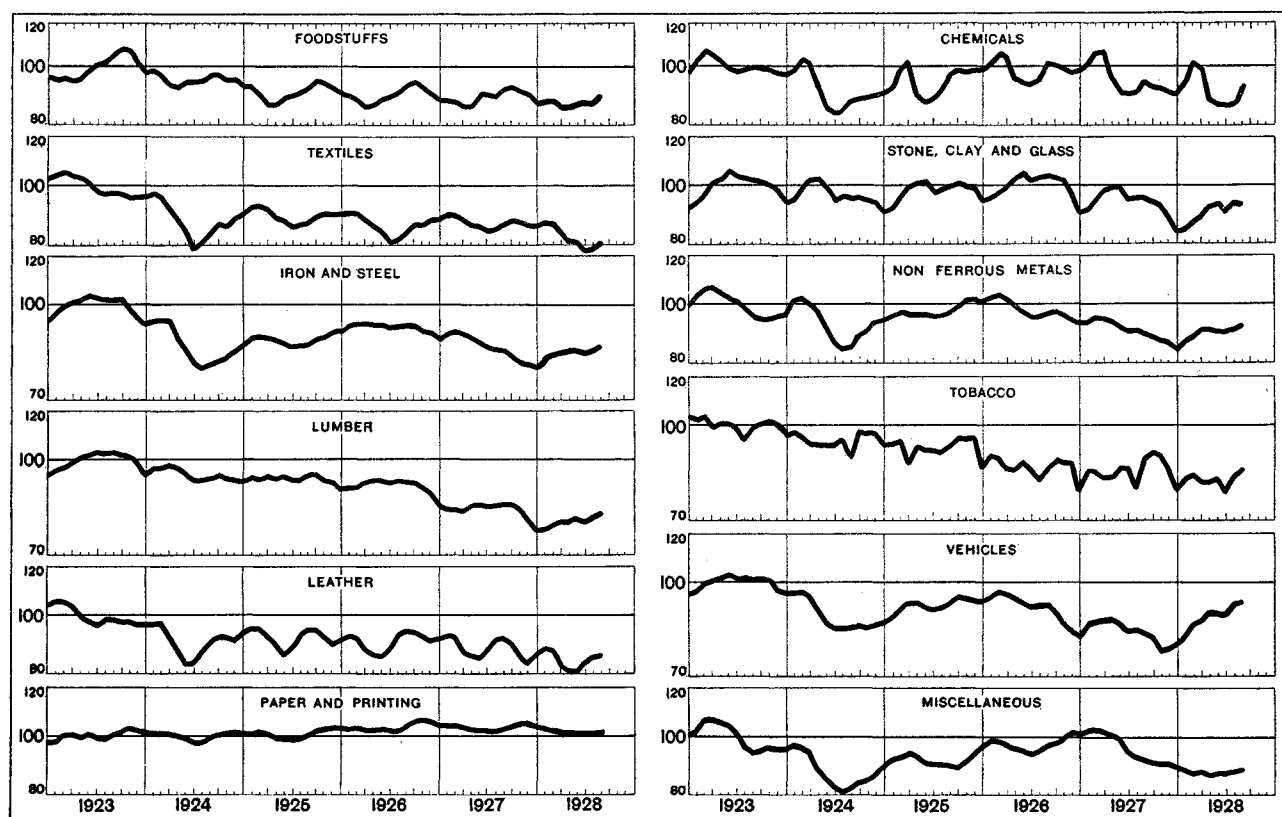
The general index of wholesale prices averaged higher than in either the previous month or September of last year. All major groups showed higher average prices than in August except hides and leather, textiles, fuels, building materials, chemicals, and house furnishings, which showed no change. As compared with a year ago, all groups were generally higher except textiles, chemicals, house furnishings, and sundry miscellaneous items, which declined. Classified by state of manufacture, all groups were higher than in either the previous month or September, 1927, except semimanufactures, which showed no change from August and a decline from September of last year.

EMPLOYMENT

The general index of factory employment showed a gain over the preceding month, but was still below the level of the corresponding month of last year. This index, it is to be noted, does not include any of the newer industries, such as aircraft, radio, rayon, etc., where employment conditions are known to be good. Compared with the previous month, all industries, for which data are available, showed larger employment except lumber, leather, and stone, clay, and glass, which showed no change. Contrasted with a year ago, all groups showed smaller employment except iron and steel, nonferrous metals and vehicles, which showed gains.

FACTORY EMPLOYMENT, BY GROUPS

[1923 monthly average = 100. September, 1928, is latest month plotted]



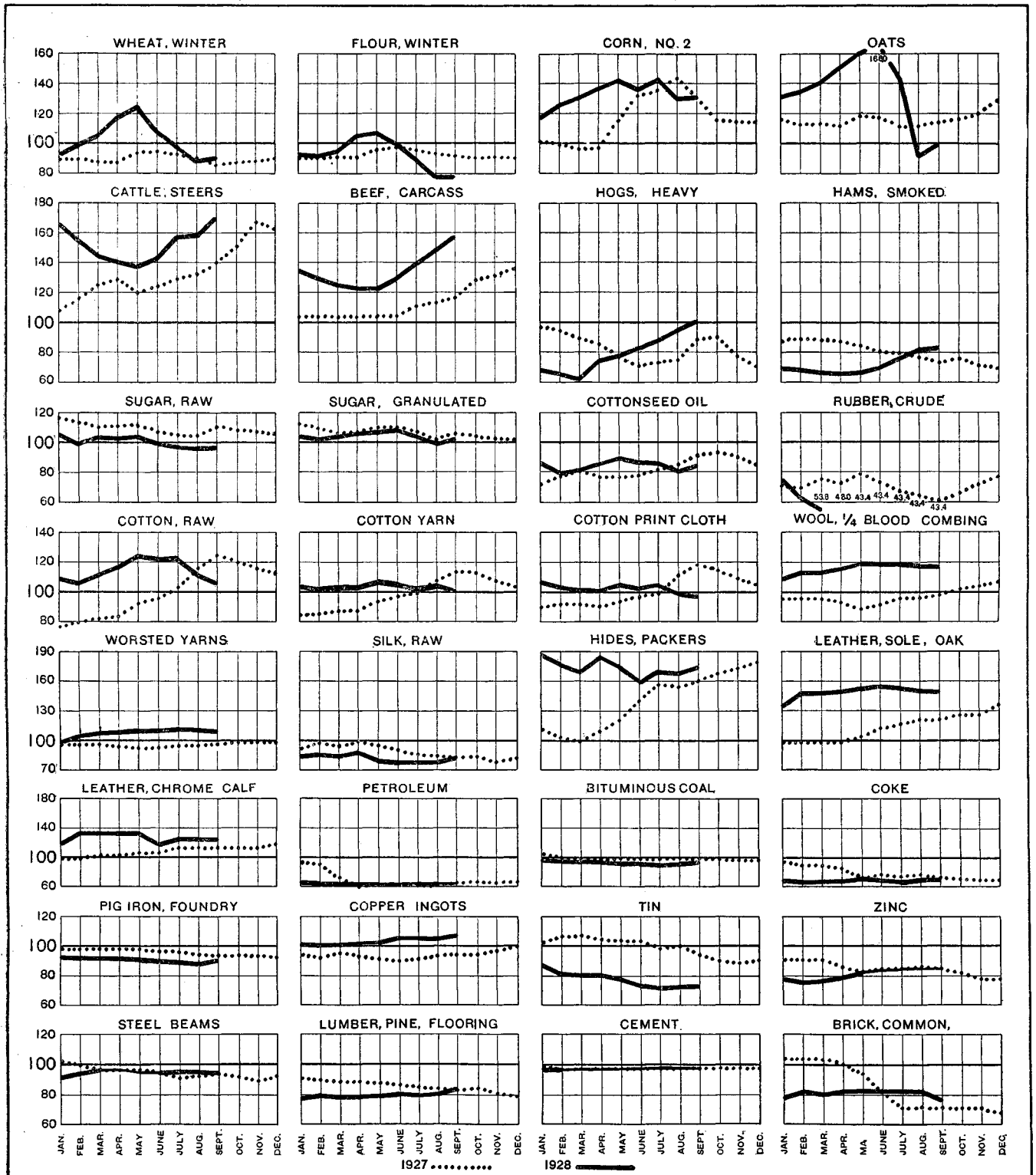
The index of prices received by farmers for their produce also showed a gain over both the previous month and September, 1927. Declines from both the previous month and a year ago were registered, however, in prices for grains, fruits and vegetables, and cotton. Certain unclassified items also showed declines from both the previous month and September of last year.

The cost-of-living index showed a gain over the previous month but no change from September of last year. All groups showed higher average prices than in August except shelter, light and sundries, which showed no change. Compared with a year ago, increased prices for food and clothing balanced declines in shelter, fuel and light, and sundries.

Factory pay-roll payments in September showed a substantial gain over both the previous month, and for the first time in months, over the corresponding period of the preceding year. As compared with August, all industrial groups showed larger pay-roll payments except iron and steel, which showed no change, and stone, clay, and glass, which showed a decline. The principal increase in wage payments over the previous month was recorded in tobacco factories. As compared with September of last year, increased pay-roll payments in vehicle, nonferrous metal, iron and steel, and paper and printing factories were more than sufficient to offset declines in textiles, food products, lumber, leather, stone, clay, and glass, and tobacco factories.

WHOLESALE PRICES FOR SPECIFIED COMMODITIES

[Relative numbers, 1926 monthly average taken as 100. September, 1928, is latest month plotted. Data from which these charts are drawn are given on the opposite page]



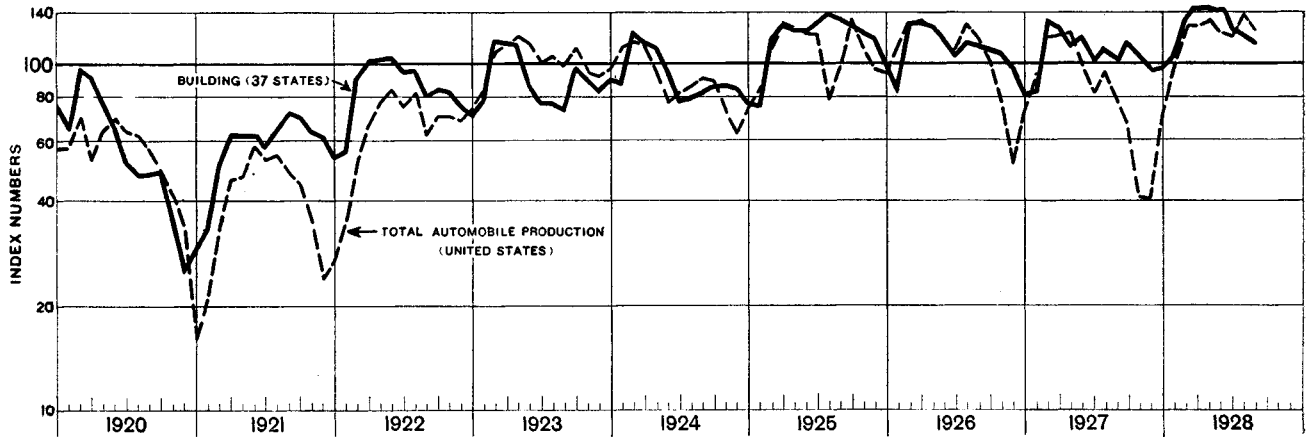
WHOLESALE PRICES FOR SPECIFIED COMMODITIES

* NOTE.—Prices to producer on farm products and market price of wool are from *U. S. Department of Agriculture, Bureau of Agricultural Economics*, nonferrous metals from the *Engineering and Mining Journal-Press*, except tin, which is from the *American Metal Market*. All other prices are from *U. S. Department of Labor, Bureau of Labor Statistics*. So far as possible all quotations represent prices to producer or at mill.

COMMODITIES	Unit	ACTUAL PRICE (dollars)			RELATIVE PRICE					
		August, 1928	September, 1928	September, 1927	1928 average=100					
					July, 1928	August, 1928	September, 1928	August, 1927	September, 1927	
FARM PRODUCTS—AVERAGE PRICE TO PRODUCER										
Wheat.....	Bushel.....	0.952	0.944	1.192	87	71	70	91	88	
Corn.....	Bushel.....	.982	.951	.953	147	141	136	140	136	
Potatoes.....	Bushel.....	.731	.648	1.074	42	39	35	79	58	
Cotton.....	Pound.....	.188	.176	.225	139	125	117	113	149	
Cottonseed.....	Ton.....	36.87	30.98	34.41	144	136	114	95	127	
Cattle, beef.....	Pound.....	.0951	.0996	.0742	142	147	154	112	115	
Hogs.....	Pound.....	1.001	1.117	.0978	82	85	95	78	83	
Lambs.....	Pound.....	1.188	1.197	.1114	106	103	103	96	96	
FARM PRODUCTS—MARKET PRICE										
Wheat, No. 1, northern spring (Minneapolis).....	Bushel.....	1.210	1.201	1.323	84	78	78	92	85	
Wheat, No. 2, red, winter (Chicago).....	Bushel.....	1.332	1.395	1.315	99	86	91	91	85	
Corn, contract grade No. 2, cash (Chicago).....	Bushel.....	.974	.993	.990	142	128	131	143	131	
Oats, contract grades, cash (Chicago).....	Bushel.....	.390	.425	.491	143	91	99	111	114	
Barley, feeding (Chicago).....	Bushel.....	.730	.673	.829	120	105	97	116	120	
Rye, No. 2, cash (Chicago).....	Bushel.....	.984	.998	.973	118	103	105	102	102	
Tobacco, leaf, average sales, warehouse (Kentucky).....	Cwt.....	11.580	7.871	15.594	107	137	93	186	184	
Cotton, middling upland (New York).....	Pound.....	.193	.185	.218	123	110	105	116	125	
Wool, 1/4 blood combing, Ohio and Pennsylvania fleeces (Boston).....	Pound.....	.54	.54	.45	120	117	117	96	98	
Cattle, steers, good to choice, corn fed (Chicago).....	Cwt.....	15.106	16.188	13.313	157	159	170	132	140	
Hogs, heavy (Chicago).....	Cwt.....	11.706	12.431	10.850	88	95	101	75	88	
Sheep, ewes (Chicago).....	Cwt.....	5.719	5.500	5.188	82	87	83	85	79	
Sheep, lambs (Chicago).....	Cwt.....	14.313	14.156	13.563	111	105	103	99	99	
FOOD										
Flour, standard patents (Minneapolis).....	Barrel.....	6.619	6.588	7.069	87	79	78	90	84	
Flour, winter straight (Kansas City).....	Barrel.....	5.656	5.650	6.644	89	78	78	93	92	
Sugar, 96° centrifugal (New York).....	Pound.....	.041	.042	.048	97	95	97	104	110	
Sugar, granulated, in barrels (New York).....	Pound.....	.055	.056	.058	104	100	102	102	106	
Cottonseed oil, prime yellow (New York).....	Pound.....	.094	.099	.107	85	80	84	84	91	
Beef, fresh, carcass, good native steers (Chicago).....	Pound.....	.244	.259	.191	139	149	158	113	116	
Beef, fresh, carcass, steers (New York).....	Pound.....	.260	.284	.213	146	152	166	117	125	
Pork, smoked hams (Chicago).....	Pound.....	.249	.254	.224	77	81	83	76	73	
Butter, creamery, 92 score (New York).....	Pound.....	.47	.49	.46	100	104	109	93	102	
Oleomargarine, standard, uncolored (Chicago).....	Pound.....	.215	.220	.239	94	94	96	94	105	
TEXTILES										
Cotton yarns, carded, white, northern, mulespun, 22-1 cones (Boston).....	Pound.....	.369	.358	.406	107	103	100	108	113	
Cotton-print cloth, 64 x 60-38 1/2"-5.35-yards to pound.....	Yard.....	.075	.074	.089	105	99	98	111	119	
Cotton sheeting, brown 4/4 Trion (New York).....	Yard.....	.091	.089	.110	99	98	96	106	118	
Worsted yarns, 2/32's cross-bred stock, white, in skein (Boston).....	Pound.....	1.600	1.575	1.375	112	112	110	94	96	
Woman's dress goods, French, 39 inches at mills, serge.....	Yard.....	1.025	.988	.975	99	99	96	94	94	
Suitings, unfinished worsted-13-ounce, mill.....	Yard.....	2.008	2.008	1.973	100	100	100	95	95	
Suitings, serge, 11-ounce, 56-58 inch.....	Yard.....	1.998	1.998	2.048	95	92	92	95	95	
Silk, Japan, 13-15.....	Pound.....	4.851	5.096	5.096	78	78	82	83	82	
Hosiery, women's, pure silk, mill.....	Dozen pair.....	10.290	10.290	10.780	85	85	85	89	89	
LEATHER										
Hides, green salted, packers' heavy native steers (Chicago).....	Pound.....	.236	.246	.224	170	168	175	153	160	
Hides, calfskins, No. 1, country, 8 to 13 pounds (Chicago).....	Pound.....	.275	.275	.210	160	159	159	122	121	
Leather, chrome calf, dull or bright "B" grades (Boston).....	Square foot.....	.565	.565	.510	125	125	125	113	113	
Leather, sole, oak, scoured backs, heavy (Boston).....	Pound.....	.670	.650	.530	153	153	148	121	121	
Boots and shoes, men's black calf, blucher (Massachusetts).....	Pair.....	6.750	6.750	6.500	106	106	106	100	102	
Boots and shoes, men's dress welt tan calf (St. Louis).....	Pair.....	5.000	5.000	5.000	102	102	102	102	102	
FUEL										
Coal, bituminous, mine-run (composite price).....	Net ton.....	4.009	4.019	4.274	92	93	93	99	99	
Coal, bituminous, prepared sizes (composite price).....	Net ton.....	4.388	4.495	5.012	90	92	94	102	105	
Coal, anthracite, chestnut (composite price).....	Long ton.....	12.853	13.040	13.353	94	93	95	96	97	
Coke, Connellsville (range of prompt and future) furnace-at ovens.....	Short ton.....	2.875	2.875	3.000	68	70	70	75	73	
Petroleum, crude, Kansas-Oklahoma-at wells.....	Barrel.....	1.210	1.210	1.198	63	64	64	61	64	
METALS										
Pig iron, foundry No. 2, northern (Pittsburgh).....	Long ton.....	18.260	18.635	19.260	89	89	90	94	93	
Pig iron, basic, valley furnace.....	Long ton.....	16.000	16.188	17.063	86	86	87	93	92	
Steel billets, Bessemer (Pittsburgh).....	Long ton.....	32.000	32.000	33.000	91	91	91	94	94	
Copper ingots, electrolytic, early delivery (New York).....	Pound.....	1.453	1.472	1.294	105	105	107	94	94	
Brass, sheets, mill.....	Pound.....	.193	.194	.183	101	101	102	96	96	
Lead, pig, desilverized, for early delivery (New York).....	Pound.....	.0625	.0645	.0630	74	74	77	79	75	
Tin, Straits (New York).....	Pound.....	.4801	.4807	.6149	72	74	74	99	94	
Zinc, slab, western (St. Louis).....	Pound.....	.0625	.0625	.0621	85	85	85	86	85	
BUILDING MATERIAL AND MISCELLANEOUS										
Lumber, pine, southern, yellow flooring, mill.....	M feet.....	36.34	37.73	37.49	80	81	84	84	83	
Brick, common red, domestic building (New York).....	Thousand.....	13.50	12.50	11.75	82	82	76	71	71	
Cement, Portland, net without bags to trade, f. o. b. plant (Chicago district).....	Barrel.....	1.600	1.600	1.600	97	97	97	97	97	
Steel beams, mill (Pittsburgh).....	Cwt.....	1.850	1.850	1.825	95	95	95	92	93	
Rubber, smoked sheets, New York.....	Pound.....	.193	.182	.338	40	40	38	72	70	
Sulphuric acid, 66° (New York).....	Ton.....	15.500	15.500	15.000	107	107	107	103	103	
Wood pulp, sulphite, domestic, unbleached, news grade (New York).....	Cwt.....	2.525	2.525	2.600	88	88	88	91	91	
Newsprint, rolls, contract, mill.....	Cwt.....	3.250	3.250	3.250	94	94	94	94	94	

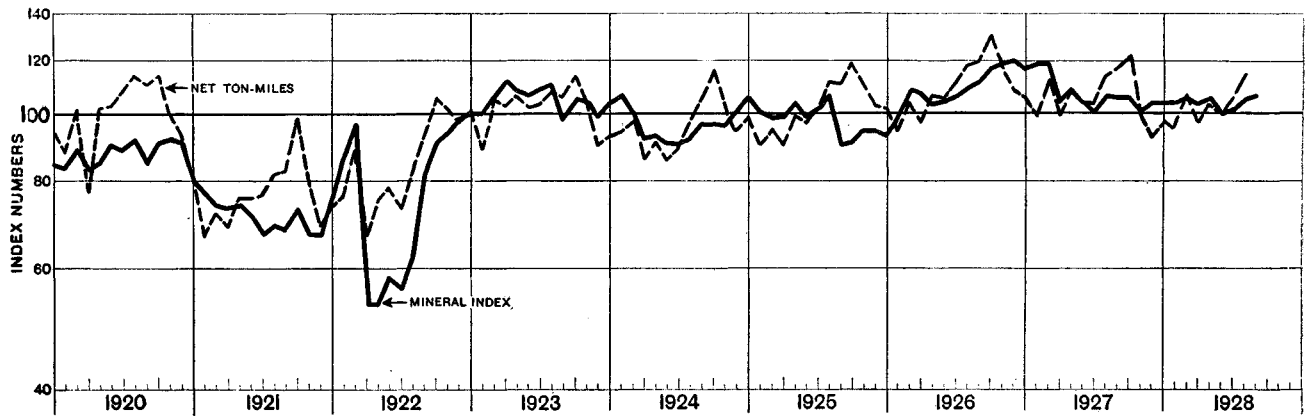
NEW BUILDING CONTRACTS AND AUTOMOBILE PRODUCTION

[Relative numbers, monthly average, 1923-1925, taken as 100]



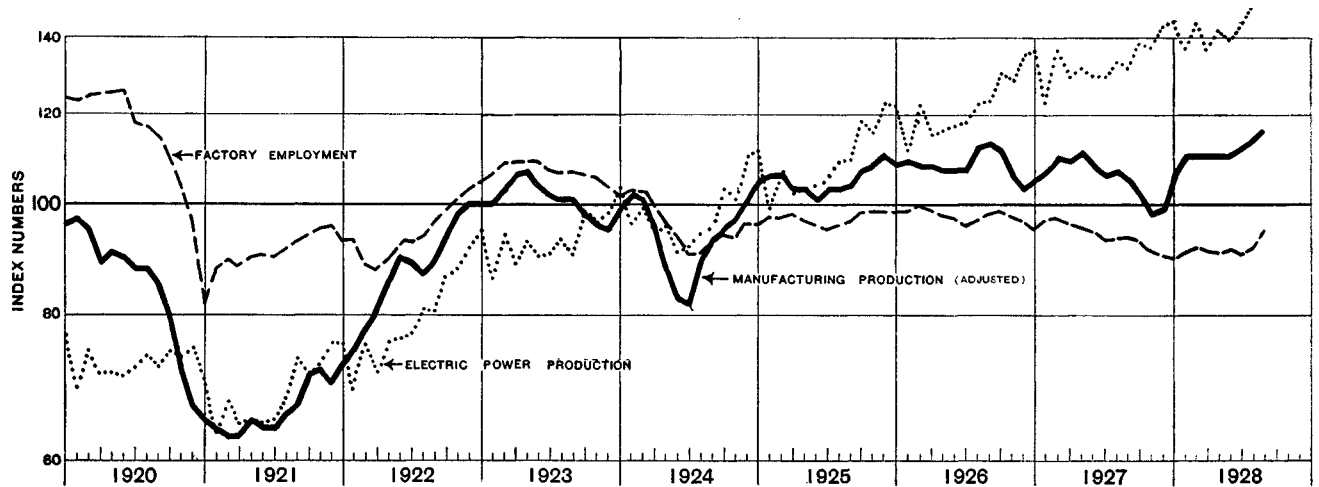
MINERAL PRODUCTION AND RAILROAD TON-MILEAGE

[Relative numbers, monthly average, 1923-1925, taken as 100]



FACTORY EMPLOYMENT, MANUFACTURING, AND ELECTRIC-POWER PRODUCTION

[Relative numbers, monthly average, 1923-1925, taken as 100]



REVIEW OF PRINCIPAL BRANCHES OF INDUSTRY AND COMMERCE

TEXTILES

Wool receipts at Boston in September were considerably smaller than in either the previous month or September of last year. Wool imports, however, were somewhat larger than in the previous month but showed a decline from a year ago. Consumption of wool was greater than in August but smaller than last year. Prices for wool and woolens were generally higher than a year ago.

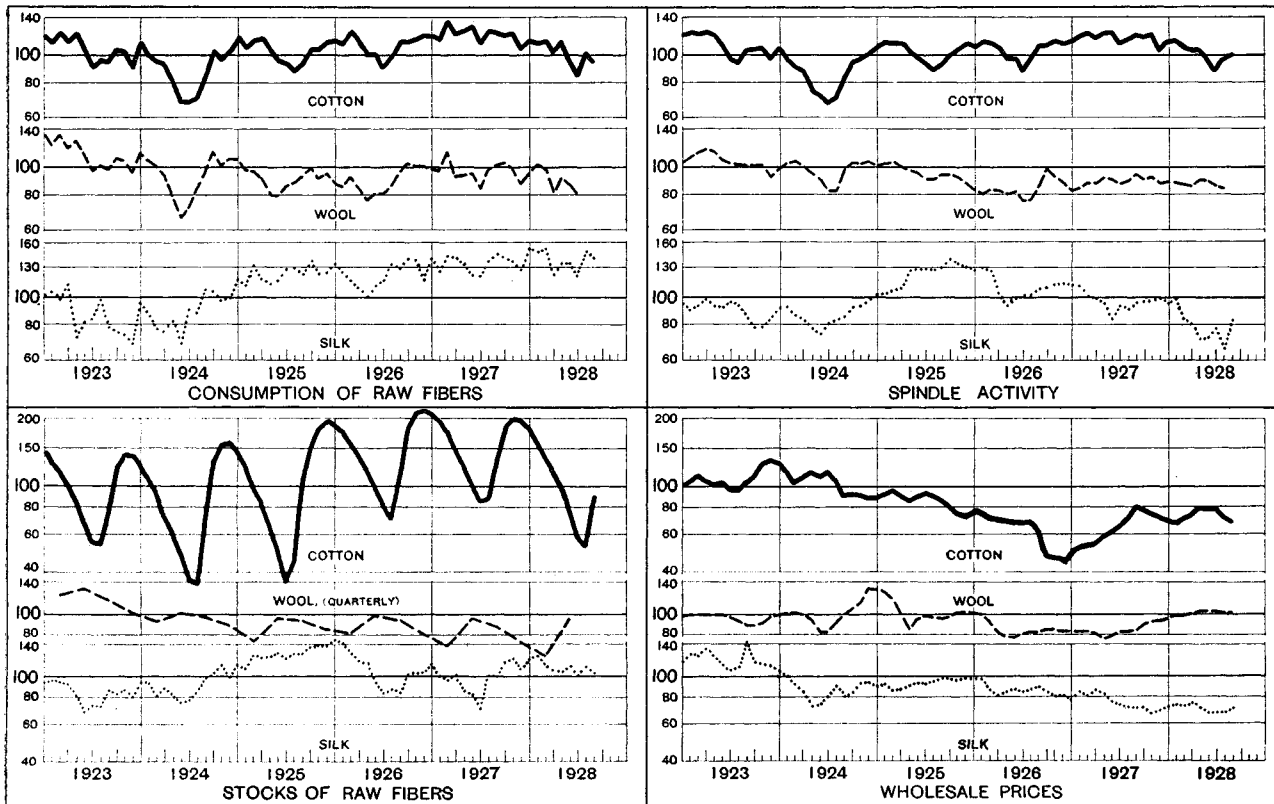
Consumption of cotton by textile mills showed declines from both the preceding month and September of last year. For the first nine months of the year,

duction of print goods was greater in September than in either previous comparable period.

Silk imports were smaller than in either the previous month or the same month of last year. Silk deliveries to consuming establishments also showed declines from both periods. Silk stocks held at warehouses at the end of September were lower than a year ago, while stocks at manufacturing plants were higher. More broad looms and spinning spindles were active than in August but narrow looms showed a decline. Compared with a year ago, broad looms and narrow looms were more active, while spindles showed a decline. The

THE TEXTILE INDUSTRIES

[Relative numbers, monthly average, 1923-1925, taken as 100. Where available, September, 1928, is latest month plotted]



cotton consumption was almost 15 per cent smaller than in the corresponding period of 1927. Stocks of cotton held at the end of September, both at mills and in public storage, were 34 per cent smaller than a year ago. Exports of raw cotton showed gains over both the previous month and the same month of last year. Cotton prices averaged lower than in either prior period.

The activity of cotton spindles was lower than in either the preceding month or September a year earlier, but reduced to a ratio to capacity, spindle activity in September was higher than in August. Production of cotton textiles showed declines from both periods. Prices of cotton goods averaged lower than in either the previous month or September of last year. Pro-

price of raw silk averaged higher than in the previous month but showed no change from a year ago. Prices for silk goods were generally unchanged from the previous month but showed a decline from last year. Imports of rayon were considerably smaller than in either the previous month or the corresponding month of last year. Rayon prices were unchanged from either period.

Textiles spread with pyroxylin showed a decline from the previous month but a considerable gain over a year ago. Unfilled orders for pyroxylin-coated textiles at the end of September were larger than at the end of either the previous month or the same month of last year. Sales of fur by dealers showed declines from both the preceding month and September, 1927.

METALS

Shipments of iron ore in September were smaller than in August, but considerably greater than a year ago. Pig-iron production, though showing a decline from the previous month, was considerably greater than in September of last year. More pig-iron furnaces were in blast at the end of September than at the end of either prior period. Wholesale prices for pig iron averaged higher than in August, but were still generally lower than a year ago.

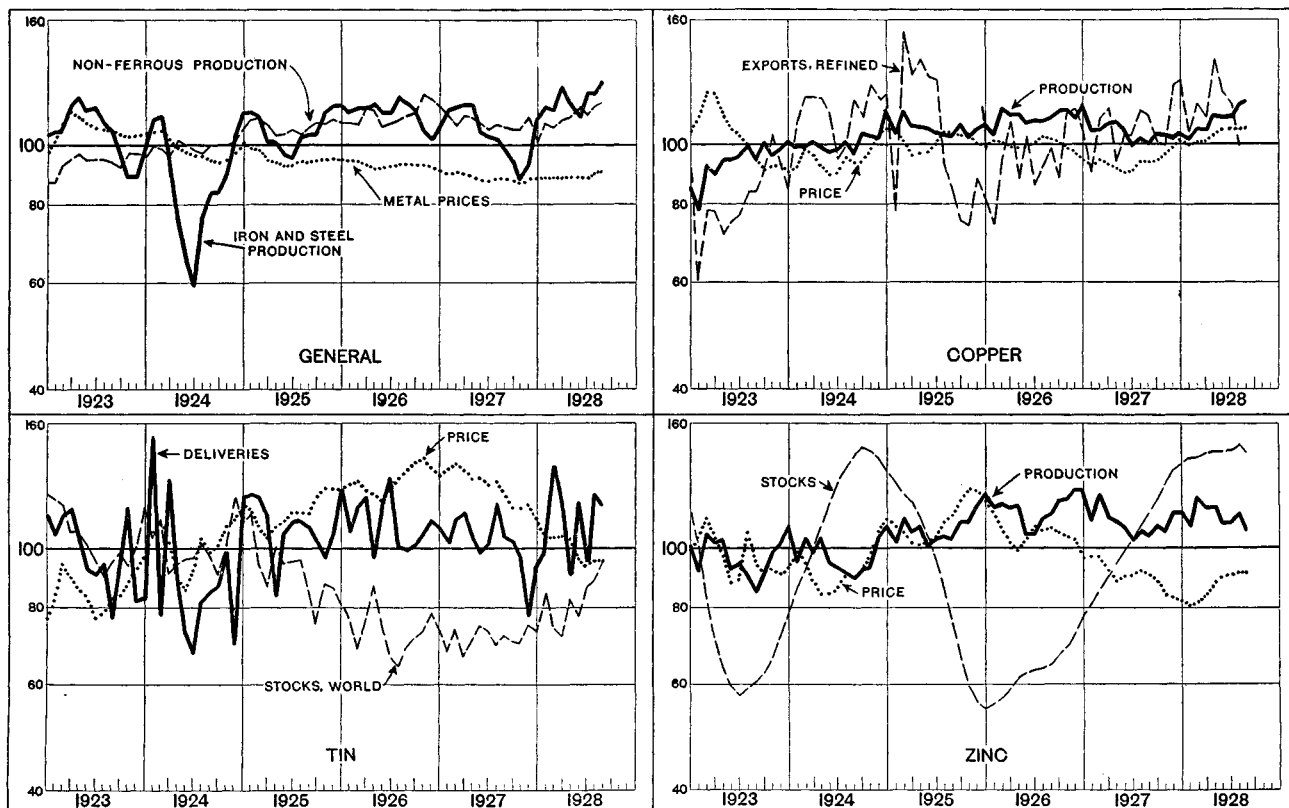
The output of steel ingots, although showing a slight decline from the previous month, was 27 per cent greater than in September of last year, while for the first nine months of the current year steel-ingot

Structural-steel orders in September, although declining from the previous month, were considerably larger than a year ago, while for the first nine months of the year new orders for structural steel were 12 per cent larger than in the same period of 1927.

New orders for machine tools were larger than in either the previous month or September of last year. New orders for electric hoists also showed gains over both periods. New orders for woodworking machinery, although showing a slight decline from August, were considerably larger than a year ago. New orders for foundry equipment were more than twice as large as in September of last year. Sales of mechanical stokers were more than 50 per cent greater than a year ago.

THE METAL INDUSTRIES

Relative numbers, monthly average, 1923-1925, taken as 100. September, 1928, is latest month plotted. Curve covering zinc stocks is plotted from 12 months' moving monthly averages plotted on the end month]



production showed a gain over the same period of last year, amounting to more than 9 per cent. Unfilled steel orders at the end of September were larger than at the end of either the preceding month or the same period of 1927. The production of steel sheets by independent manufacturers showed a decline from August but was 44 per cent larger than a year ago, while for the first nine months of the year the output of sheets showed a gain of almost 15 per cent over the same period of last year.

Production of steel castings showed a decline from August, but was greater than a year ago. New orders for steel castings, however, showed gains over both periods.

Shipments of motorized fire-fighting equipment were greater than in either the previous month or September of last year. Shipments of electrical industrial trucks and tractors also showed gains over both periods.

The mine production of copper showed gains over both the previous month and September of last year. For the calendar year to date the smelter production of copper was about 5 per cent greater than in the same period of last year. The wholesale price of copper averaged higher than in either the previous month or the same month of last year. Exports of refined copper were smaller than in either prior period, but for the calendar year to date copper exports were 8 per cent larger than in the first nine months of 1927.

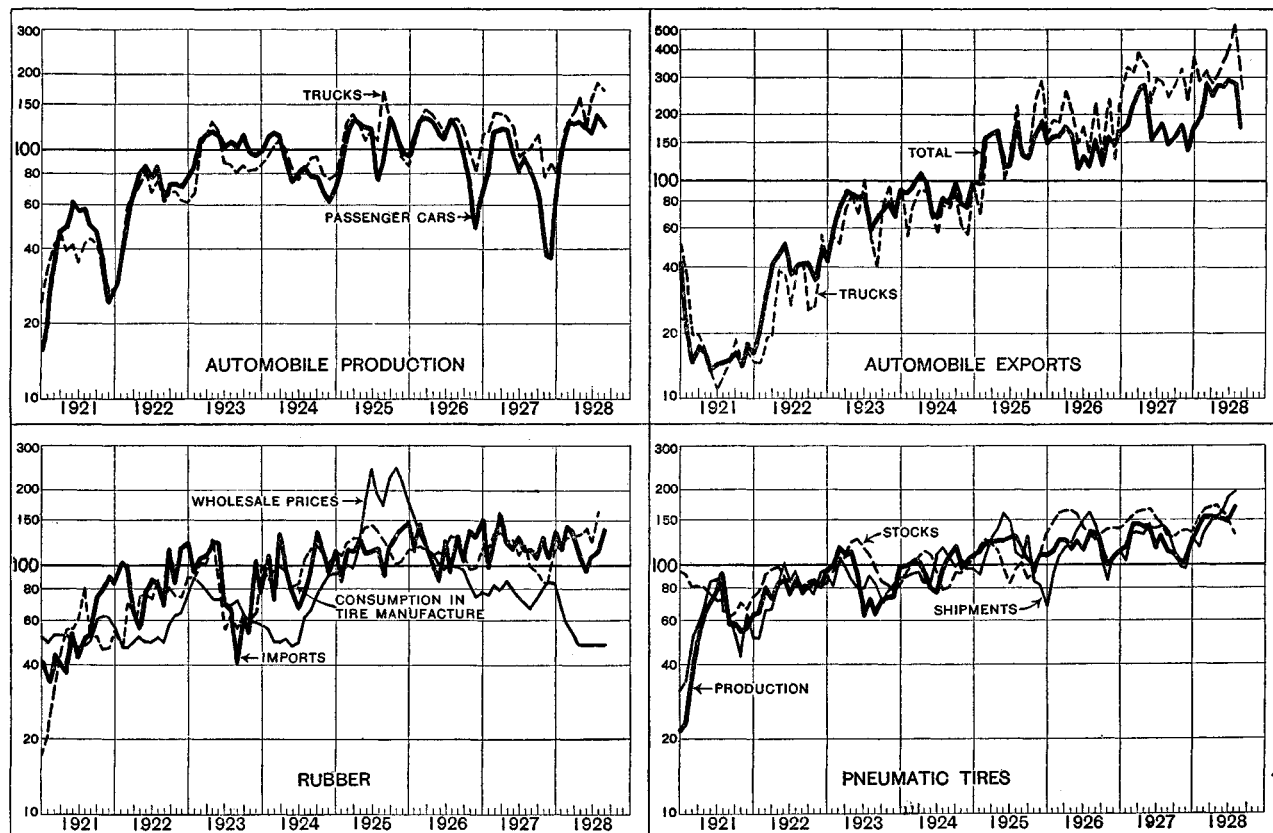
FUELS

The output of bituminous coal in September was smaller than in either the preceding month or the same month a year ago. The production of bituminous during the first nine months showed a decline of 10 per cent from the corresponding period of last year. Anthracite production also showed declines in September from both the previous month and September, 1927. The total production of coke showed practically no change from the previous month, but was substantially greater than in September of last year.

month of 1927, but for the first nine months of the year total imports were 24 per cent larger than during the same period of 1927. Prices of cattle hides and calfskins averaged higher than in September of last year. The output of sole leather was smaller than in either the previous month or the same month of 1927. Exports of sole and belting leather, although declining from the previous month, were slightly larger than a year ago. Prices for leather showed only slight change from the previous month, but were generally higher than in September, 1927.

THE AUTOMOBILE AND RUBBER INDUSTRIES

[Relative numbers, monthly average 1923-1925 taken as 100. Where available, September, 1928, is latest month plotted]



AUTOMOBILES AND RUBBER

The total production of automobiles, both passenger cars and trucks, was smaller than in August, but was about 59 per cent greater than in September, 1927. For the first nine months of the current year production of almost 3,500,000 vehicles represents an increase of about 20 per cent over the same period of last year. Shipments of accessories and parts in September were considerably greater than a year ago.

Shipments of pneumatic tires during August were considerably greater than in either the previous month or August a year ago. For the first eight months of the year domestic shipments of pneumatic tires by manufacturers were 16 per cent larger than in the same period of 1927.

HIDES AND LEATHER

Imports of hides and skins in September were smaller than in either the previous month or the same

month of 1927, but for the first nine months of the year total imports were 24 per cent larger than during the same period of 1927. Prices of cattle hides and calfskins averaged higher than in September of last year. The output of sole leather was smaller than in either the previous month or the same month of 1927. Exports of sole and belting leather, although declining from the previous month, were slightly larger than a year ago. Prices for leather showed only slight change from the previous month, but were generally higher than in September, 1927.

PAPER

Production of newsprint paper showed declines in September from both the previous month and the same month of last year, while for the first nine months of the year the domestic output of newsprint was 8 per cent smaller than in the same period of 1927. Canadian production of newsprint during the same period showed a gain of 14 per cent over the first nine months of 1927.

Imports of pulp during the first nine months of the year were larger than in 1927.

BUILDING AND CONSTRUCTION

Building costs were generally higher than in either the previous month or September a year ago. Prices for building materials, though showing no change from the previous month, were generally lower than a year ago. The value of new building contracts awarded was considerably larger than in either the preceding month or September a year ago, while for the first nine months of the year building awards was 7 per cent greater than during the same period of 1927. Fire losses in the United States and in Canada were smaller than in either the previous month or September a year ago, with

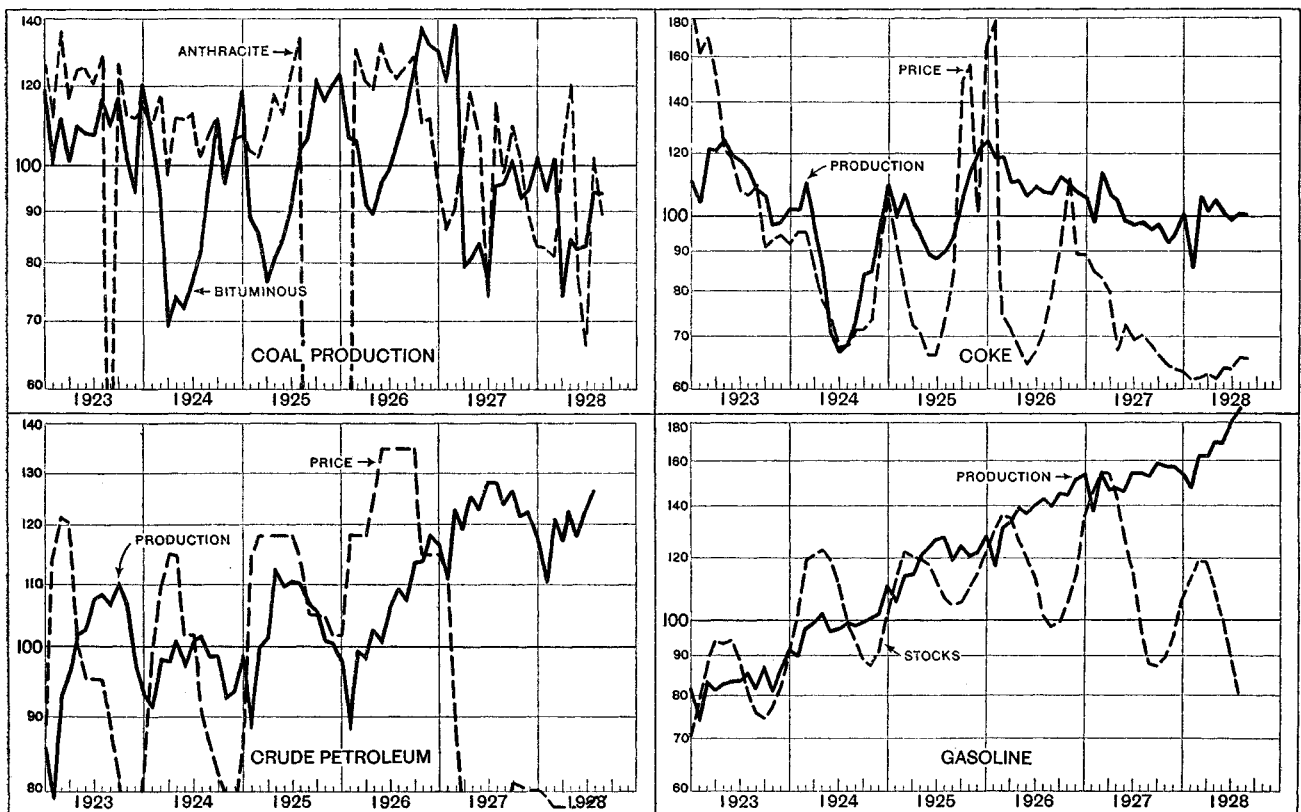
prices for softwoods averaged higher than in the previous month, but were lower than in September, 1927.

STONE AND CLAY PRODUCTS

The production of face brick averaged higher than in either the previous month or September a year ago, with shipments showing similar comparisons. Prices for common brick averaged lower than in August but were higher than a year ago. New orders for procelain plumbing fixtures were lower than in August. New orders for terra cotta showed declines from both the previous month and the same month a year ago.

THE FUEL INDUSTRIES

[Relative numbers, monthly average 1923-1925 taken as 100. September, 1928, is latest month plotted where data were available]



the total for the first nine months of the year recording a decline of 8 per cent from the same period of last year.

LUMBER AND LUMBER PRODUCTS

The output of southern pine lumber was smaller than in either the previous month or September a year ago. Douglas-fir production also showed declines from both periods. The production of northern pine, although declining from August, was greater than in September, 1927. The output of California white pine, California redwood, and North Carolina pine was smaller than in either the previous month or the same month a year ago.

The production of oak flooring, although smaller than in August, was greater than a year ago. Maple-flooring production, however, showed declines from both periods. Prices for hardwoods averaged lower than in August, declining also from a year ago, but

The production of Portland cement, though declining from August, was larger than a year ago, while for the first nine months of the year, cement output showed a gain of 2 per cent over the same period of last year. Cement stocks were about 20 per cent larger than a year ago. Prices for cement averaged lower than in either the previous month or the same month of 1927.

New awards for concrete paving were lower than in August but considerably larger than a year ago, while for the year to date, concrete paving awards, measured in area, were 23 per cent larger than in the same period of 1927.

The output of polished plate glass in September was smaller than in the preceding month but greater than a year ago, with the total for the first nine months of 1928 showing a gain of about 6 per cent over the corresponding period of last year.

FOODSTUFFS AND TOBACCO

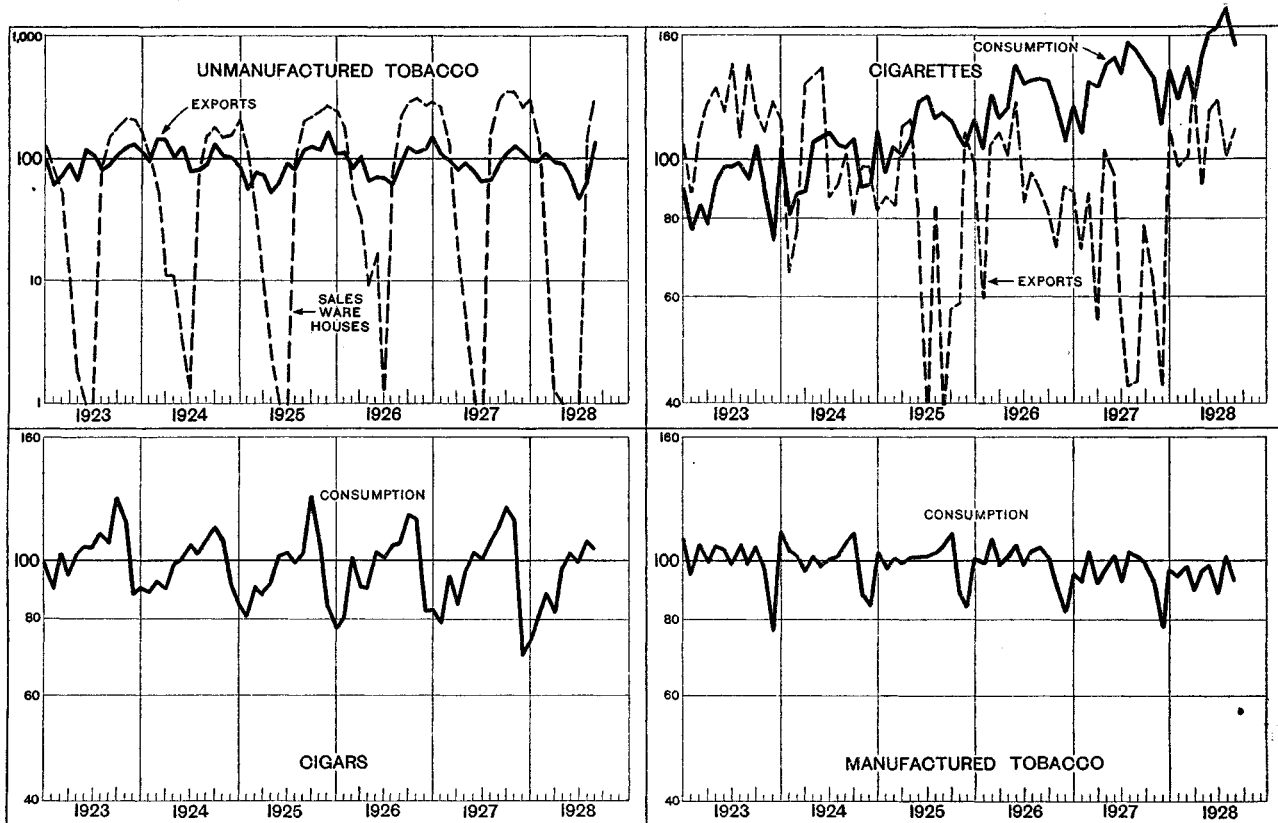
The visible supply of wheat, both in the United States and Canada, was greater than a year ago. Receipts of wheat at principal markets, however, were smaller than last year, with shipments making a similar comparison. Exports of wheat and flour were lower than a year ago. Prices for winter wheat were generally higher than last year, while spring wheat prices averaged lower. The visible supply of corn at the end of September was 72 per cent smaller than a year ago. Receipts and shipments of corn at principal markets were smaller than in September a year ago. Exports of corn, including meal, were greater than a year ago. Prices of corn averaged higher than in the previous month but showed no change from last year.

Receipts and shipments of hogs at primary markets were larger than in September, 1927. The inspected slaughter of pork products was smaller than a year ago. Cold-storage holdings of pork at the end of September showed a substantial decline from the corresponding period of last year. Prices for hogs and pork products averaged higher than in either period.

Receipts and shipments of sheep were larger than a year ago. The production of lamb and mutton under Federal inspection showed only slight changes from a year ago. Storage holdings at the end of the month were substantially larger than a year ago. Prices for sheep and lamb averaged lower than in the previous month but were higher than in September of last year. Receipts of poultry at the principal markets showed a decline from a year ago, while storage

THE TOBACCO INDUSTRIES

[Relative numbers, monthly average, 1923-1925 taken as 100. Where available, September, 1928, is latest month plotted]



The visible supply of oats was smaller than a year ago but for barley was considerably larger. Receipts of oats in principal markets showed a decline from last year. Exports of both oats and barley were larger than in September, 1927. Prices for oats averaged higher than in August but were lower than a year ago, while prices for barley averaged lower than in either period.

Receipts and shipments of cattle at primary markets were larger than in either the preceding month or September of last year. The production of inspected slaughter of beef was smaller than in September, 1927.

holdings showed a small gain. Fish held in cold storage showed a gain over a year ago. Receipts of butter at the principal markets, though declining from August, showed a gain over last year. Storage holdings of creamery butter were considerably smaller than a year ago. Prices for butter averaged higher than in either the previous month or September a year ago. Receipts of cheese were considerably lower than last year, but storage holdings were greater. Receipts of eggs were larger than in September, 1927. Storage holdings of eggs at the end of the month were also greater than a year ago.

TRANSPORTATION

Car loadings in September were 2 per cent larger than in the same month of last year, but for the first nine months of the year loadings were more than 2 per cent smaller than in the same period of 1927. Traffic through the Sault Ste. Marie Canals, although lighter than in August, was 19 per cent greater than a year ago. Traffic through the New York State canals and the Cape Cod Canal was also greater than a year ago. Vessels clearing American ports showed larger tonnages than in September of last year.

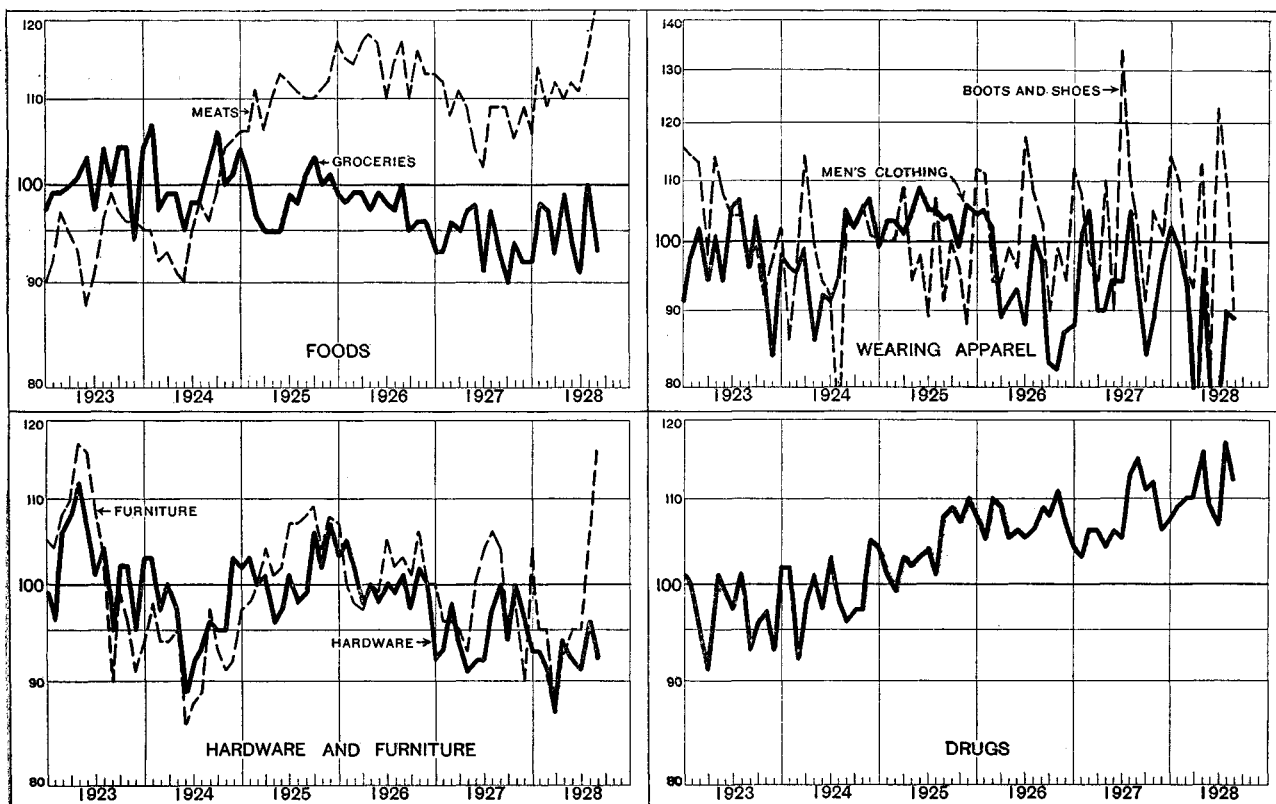
period a year earlier. Deposits in New York State savings banks continued to expand, the increase over a year ago amounting to more than 6 per cent.

DISTRIBUTION MOVEMENT

Sales of mail-order houses and 10-cent chain stores showed larger dollar volumes than in either the previous month or in September, 1927. Magazine advertising was greater than in either period, while newspaper advertising, although showing a gain over August, was fractionally lower than in September,

WHOLESALE TRADE

[Relative numbers, monthly average 1923-1925 taken as 100. September, 1928, is latest month plotted. Curves are adjusted for seasonal variation]



BANKING AND FINANCE

Check payments outside of New York City were larger than in either the previous month or September a year ago, with the total for the first nine months of the year showing a gain of 8 per cent over the same period of 1927. Loans and discounts of Federal reserve member banks showed expansion as compared with both the preceding month and September a year ago. Bills discounted by the Federal reserve banks were smaller than in August but more than twice as large as a year ago. The Federal reserve ratio was lower than in either the previous month or September of last year. Interest rates on both time and call loans averaged higher than in either the previous month or the same period of last year. New sales of life insurance were greater than in either prior period, while for the first nine months of the year, life-insurance sales were 9 per cent larger than in the same

1927. Postal receipts were larger than in August. Air mail continued to show growth, larger weights being transmitted than in either the preceding month or the corresponding month of last year. Dividend and interest payments scheduled for distribution in October were greater than in either the previous month or the same month of last year. Dividend and interest payments for the first 10 months of the year showed a gain of 5 per cent over the same period of last year.

GOLD, SILVER, AND FOREIGN EXCHANGE

Receipts of domestic gold at the mint were smaller than in either the previous month or September a year ago. The Rand output of gold, though showing a decline from August, was greater than a year ago. During September gold imports were larger than exports in contrast with a considerable export balance during the same month a year earlier. Silver produc-

tion showed declines from both the previous month and the same month of 1927. Silver prices averaged lower than in August, but were higher than a year ago.

Exchange on the principal foreign currencies showed only small changes from August, with the exception of an increase in the Japanese yen. Contrasted with last year, the principal changes were downward, declines occurring in the Italian lira, the Swedish krone, the Japanese yen, and the Argentine peso.

PROSPECTIVE CAR LOADINGS, FOURTH QUARTER OF 1928

Commodity loadings by railroads in carload lots for the fourth quarter of 1928 are estimated by the regional advisory boards set up by the American Railway Association at 4.9 per cent above the same period of 1927. These estimates are compiled from detailed reports obtained from shippers, as first described in the August, 1927, issue of the Survey of Current Business, page 20, and are comparable to similar data published quarterly since that time. The various economic districts set up by these boards are shown in the accompanying chart.

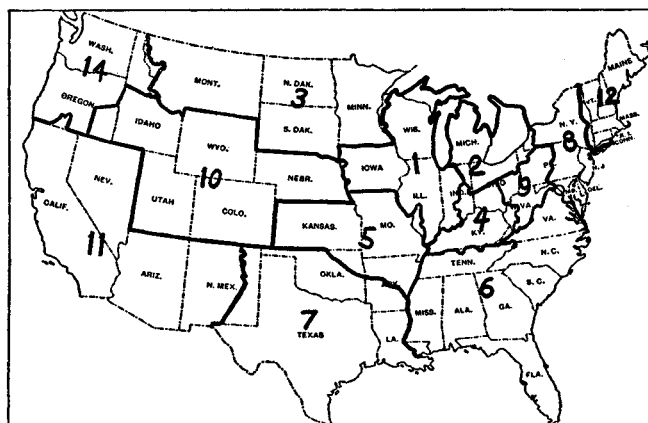
Estimated loadings of all commodities for the last quarter of 1928 will be greater than a year ago except for potatoes, livestock, poultry and dairy products, sugar and sirups, in each of which declines of about 3 per cent are estimated. The largest numerical increase over a year ago was estimated for coal and coke, while the greatest relative increase is seen for automobiles.

In only 2 out of the 13 districts are decreases estimated from the corresponding quarter of 1927. The

Ohio Valley district is estimated to show a decline of 9 per cent, the decrease of almost 120,000 cars for poultry and dairy products being more than sufficient to offset estimated increases in other lines. The central western district shows an estimated decline from a year ago of a little more than 2 per cent.

The greatest relative increase in loadings is estimated for the Allegheny district, with almost 16 per cent, due largely to greater coal and coke loadings. The next largest increase is shown for the southwest district, where a relative gain of 12 per cent is anticipated. Gains of 3 per cent or more are expected in New England, the Atlantic States, the Allegheny district, the Great Lakes region, the southeast, the mid-west, the northwest, Trans-Missouri-Kansas, and the southwest districts.

REGIONAL ADVISORY BOARD DISTRICTS



PROSPECTIVE CAR LOADINGS, FOURTH QUARTER OF 1928 COMPARED WITH ACTUAL LOADINGS SAME QUARTER OF 1927

(As reported by commodity committees, regional shippers' advisory boards, and compiled by American Railway Association)

COMMODITY GROUPS	ALL DISTRICTS			District No. 12 NEW ENGLAND			District No. 8 ATLANTIC STATES			District No. 9 ALLEGHENY		
	Actual 1927	Esti- mated 1928	Per cent inc. (+) or dec. (-)	Actual 1927	Esti- mated 1928	Per cent inc. (+) or dec. (-)	Actual 1927	Esti- mated 1928	Per cent inc. (+) or dec. (-)	Actual 1927	Esti- mated 1928	Per cent inc. (+) or dec. (-)
1 Grain, all.....	468,325	508,544	+8.6	2,960	2,664	-10.0	33,965	33,960	-----	1,735	1,336	-23.0
2 Flour, meal, and other mill products.....	249,852	266,693	+6.7	2,794	2,515	-10.0	14,197	14,190	-----	4,498	4,498	-----
3 Hay, straw, and alfalfa.....	84,687	85,108	+5	1,130	565	-50.0	9,728	9,720	-----	1,033	981	-5.0
4 Cotton.....	150,092	181,235	+20.7	1,383	1,383	-----	-----	-----	-----	-----	-----	-----
5 Cottonseed and cottonseed products, except oil.....	99,107	107,060	+8.0	12	12	-----	-----	-----	-----	-----	-----	-----
6 Citrus fruits.....	26,373	32,569	+23.5	123	120	-----	-----	-----	-----	-----	-----	-----
7 Other fresh fruits.....	124,597	141,566	+13.6	4,780	4,780	-----	21,991	27,489	+25.0	5,530	5,143	-7.0
8 Potatoes.....	111,954	108,732	-2.9	14,582	14,600	-----	14,821	16,674	+12.5	680	714	+5.0
9 Other fresh vegetables.....	55,806	56,148	+6	544	544	-----	13,113	11,802	-10.0	830	747	-10.0
10 Livestock.....	441,685	431,183	-2.4	1,349	1,282	-5.0	-----	-----	-----	3,346	3,346	-----
11 Poultry and dairy products.....	26,349	25,657	-2.6	139	139	-----	-----	-----	-----	-----	-----	-----
12 Coal and coke.....	3,033,956	3,157,032	+4.1	24,535	26,989	+10.0	398,264	434,108	+9.0	710,843	848,036	+19.3
13 Ore and concentrates.....	352,274	385,731	+9.5	98	100	-----	24,689	24,680	-----	-----	-----	-----
14 Clay, gravel, sand, and stone ¹	859,574	876,980	+2.0	13,979	13,979	-----	107,164	107,378	+2	71,705	75,147	+4.8
15 Salt.....	17,430	18,071	+3.7	63	60	-----	-----	-----	-----	-----	-----	-----
16 Lumber and forest products.....	880,598	901,029	+2.3	32,697	32,700	-----	33,983	31,434	-7.5	13,533	14,453	+6.8
17 Petroleum and petroleum products.....	556,717	595,121	+6.9	22,124	24,778	+12.0	75,177	82,695	+10.0	19,376	20,945	+8.1
18 Sugar, sirup, glucose, and molasses.....	52,112	50,619	-2.9	2,011	2,000	-----	9,820	10,115	+3.0	-----	-----	-----
19 Iron and steel.....	361,805	388,280	+7.3	3,851	4,236	+10.0	67,823	72,910	+7.5	132,151	144,177	+9.1
20 Castings, machinery, and boilers.....	55,516	58,509	+5.5	5,716	6,002	+5.0	13,804	15,184	+10.0	7,236	7,706	+6.5
21 Cement.....	180,894	188,004	+3.9	3,004	3,304	+10.0	54,006	54,000	-----	8,478	9,818	+15.8
22 Brick and clay products.....	166,604	162,120	-2.7	3,328	2,829	-15.0	23,856	23,850	-----	31,437	32,537	+3.5
23 Lime and plaster.....	54,824	56,063	+2.2	3,375	3,038	-10.0	17,918	17,201	-4.0	3,303	4,327	+31.0
24 Agricultural implements and vehicles (other than automobiles).....	30,620	32,825	+7.2	754	750	-----	-----	-----	-----	4,657	4,871	+4.6
25 Automobiles, trucks, and parts.....	152,150	197,116	+29.6	1,445	1,589	+10.0	8,365	10,038	+20.0	-----	-----	-----
26 Fertilizers, all kinds.....	61,371	65,267	+6.3	2,326	2,326	-----	7,302	10,719	+46.8	2,316	2,335	+0.8
27 Paper, printed matter, and books.....	78,932	83,475	+5.8	11,906	12,501	+5.0	18,368	20,756	+13.0	2,226	2,682	+20.5
28 Chemicals and explosives.....	62,221	67,220	+8.0	2,408	2,450	+1.7	16,070	16,874	+5.0	7,830	10,265	+31.1
29 Canned goods ²	51,448	51,465	-----	2,095	2,095	-----	13,061	12,016	-8.0	1,757	1,794	+2.1
Total, all commodities listed.....	8,838,477	9,279,472	+4.9	165,511	170,330	+2.9	997,485	1,057,793	+6.0	1,034,500	1,195,858	+15.6

¹ Including crude and powdered gypsum.

² Also includes catsups, jams, jellies, olives, pickles, preserves, etc.

INDEXES OF BUSINESS

The index numbers presented in this table are designed to show the trend in production, prices, trade, etc., by commodities or groups. They consist in general of weighted combinations of series of individual relative numbers; often the individual relative numbers are also given. The function of index and relative numbers is explained on the inside front cover. All of the index numbers, except where noted, are based on the average of the years 1923 to 1925, while maxima and minima are given only since 1923, thus eliminating the abnormal period prior to 1923. Complete descriptions and figures for earlier years may be found in the following issues of the Survey (later data being available in the latest semiannual issues): Production, in the July, 1928, issue (No. 83), pages 18 to 22; stocks in the August, 1928, issue (No. 84), pages 20 to 22; new orders in the September, 1928, issue (No. 85), page 19; unfilled orders in the January, 1928, issue (No. 77), pages 22 and 23; wholesale trade in the January, 1928, issue (No. 77), page 21; mail-order and chain stores in the May, 1928, issue (No. 81), pages 20 and 21; department stores in the April, 1928, issue (No. 80), pages 20 and 21; employment, based on 1923 as 100, in the August, 1928, issue (No. 84), page 108; farm prices, in the August, 1928, issue (No. 84), page 27; wholesale prices (Department of Labor), in the November, 1927, issue (No. 75), page 24, and the June, 1928, issue (No. 82), page 23; wholesale prices, commercial, in the August, 1928, issue (No. 84), page 26; cost of living in the August, 1928, issue (No. 84), page 27, and the June, 1926, issue (No. 58), page 24.

Relative to 1923-1925 monthly average as 100	Maximum since Jan. 1, 1923	Minimum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			July	August	September	July	August	September	Sept., 1928, from Aug., 1928	Sept., 1928, from Sept., 1927
PRODUCTION										
TOTAL INDUSTRIAL										
Unadjusted, except for working days.....	114	81	102	105	106	105	110	112	+1.8	+5.7
Adjusted for seasonal variations.....	114	83	106	107	105	109	112	114	+1.8	+8.6
MANUFACTURING										
Total (adjusted for working days only).....	114	79	101	104	106	106	110	112	+1.8	+5.7
Total (adjusted for seasonal variations).....	116	82	106	107	105	111	113	116	+2.7	+10.5
Iron and steel.....	127	59	103	102	98	121	121	127	+5.0	+29.6
Textiles.....	121	77	118	119	118	100	109	108	-0.9	-8.5
Food products.....	106	92	96	97	93	89	91	98	+7.7	+5.4
Paper and printing.....	118	91	114	112	113	117	117	---	---	---
Lumber.....	110	90	95	95	99	96	92	87	-5.4	-12.1
Automobiles.....	139	47	84	89	81	120	133	139	+4.5	+71.6
Leather and shoes.....	117	86	113	112	113	112	111	109	-1.8	-3.5
Cement, brick, and glass.....	128	92	111	115	113	117	124	128	+3.2	+13.3
Nonferrous metals.....	121	87	106	108	107	112	116	117	+0.9	+9.3
Petroleum refining.....	160	84	136	136	139	155	160	---	---	---
Rubber tires.....	166	66	124	119	113	155	154	166	+7.8	+46.9
Tobacco manufactures.....	129	93	109	119	123	125	131	129	-1.5	+4.9
MINERALS										
Total (adjusted for working days only).....	124	84	103	111	111	103	110	113	+2.7	+1.8
Total (adjusted for seasonal variations).....	120	90	100	106	105	101	105	106	+1.0	+1.0
Bituminous coal.....	125	77	87	92	92	94	91	94	+3.3	+2.2
Anthracite coal.....	133	1	75	107	100	66	95	95	0.0	-5.0
Crude petroleum.....	126	88	124	123	124	119	123	126	+2.4	+1.6
Iron-ore shipments.....	134	0	99	99	87	103	105	84	-20.0	-3.4
Copper.....	121	82	101	101	104	113	116	121	+4.3	+16.3
Zinc.....	124	93	109	114	111	117	121	114	-5.8	+2.7
Lead.....	125	75	116	112	111	97	108	---	---	---
Silver.....	123	85	94	94	90	76	87	79	-9.2	-12.2
ANIMAL PRODUCTS (marketings)										
Total.....	124	79	109	105	87	108	97	92	-5.2	+5.7
Wool.....	421	26	421	225	89	387	195	54	-72.3	-39.3
Livestock.....	131	76	76	89	85	78	79	92	+16.5	+8.2
Poultry and eggs.....	148	68	81	77	75	92	80	81	+1.3	+8.0
Dairy products.....	160	64	142	123	89	138	117	95	-18.8	+6.7
Fish.....	187	44	154	187	150	154	170	137	-19.4	-8.7
CROPS (marketings)										
Total.....	231	45	65	115	183	87	115	178	+54.8	-2.7
Grains*.....	205	38	116	169	178	147	186	165	-11.3	-7.3
Vegetables*.....	199	60	99	86	146	107	83	133	+60.2	-8.9
Fruits*.....	251	55	114	124	183	164	165	206	+24.8	+12.6
Cotton products*.....	346	11	12	74	186	28	45	184	+308.9	-1.1
Miscellaneous crops*.....	266	22	25	106	220	22	117	206	+76.1	-6.4
FOREST PRODUCTS										
Total.....	112	80	89	99	98	88	90	78	-13.3	-20.4
Lumber.....	112	80	91	102	99	88	90	78	-13.3	-21.2
Pulpwood.....	151	54	64	63	84	64	82	68	-17.1	-19.0
Gum (rosin and turpentine)*.....	161	18	124	119	124	170	161	129	-19.9	+4.0
Distilled wood.....	148	66	90	116	113	76	72	65	-9.7	-42.5

*Fluctuations between maximum and minimum due largely to seasonal conditions: Minerals and Manufacturing are adjusted for seasonal variations except where noted.

INDEXES OF BUSINESS—Continued

Relative to 1923-1925 monthly average as 100	Maximum since Jan. 1, 1923	Minimum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			July	August	September	July	August	September	Sept., 1928, from Aug., 1928	Sept., 1928, from Sept., 1927
PRODUCTION—Continued										
NEW ORDERS										
Total.....	139	25	86	94	96	95	98			
Textiles.....	153	30	84	108	118	77	90			
Iron and steel.....	144	24	111	96	99	116	118			
Lumber.....	141	22	83	99	101	98	101			
Paper and printing.....	128	14	99	102	107	101	109			
Stone and clay products.....	129	19	93	98	99	97	97			
STOCKS										
Grand total.....	134	82	104	108	119	104	107	116	+8.4	-2.5
Total manufactured goods.....	120	88	116	114	113	117	114	111	-2.6	-1.8
Foodstuffs.....	129	79	128	129	116	126	117	106	-9.4	-8.6
Textiles.....	138	78	111	95	108	129	135	134	-0.7	+24.1
Iron and steel.....	152	78	118	117	125	140	133	131	-1.5	+4.8
Nonferrous metals.....	133	74	118	114	111	124	125	131	+4.8	+18.0
Lumber.....	125	78	117	118	118	97	98	96	-2.0	-18.6
Stone, clay, etc.....	178	64	132	123	116	149	140	130	-7.1	+12.1
Leather.....	123	66	68	69	69	71	72	71	-1.4	+2.9
Rubber.....	185	77	150	140	129	145	134	126	-6.0	-2.3
Paper.....	155	46	106	116	118	155	156	136	-12.8	+15.3
Chemicals and oils.....	125	84	98	94	97	91	90	97	+7.8	-0.0
Total raw materials.....	150	69	95	104	124	95	102	119	+16.7	-4.0
Foodstuffs.....	159	68	108	119	125	121	136	144	+5.9	+15.2
Textiles.....	202	43	88	96	135	67	66	96	+45.5	-28.9
Metals.....	136	54	89	96	103	87	100	116	+16.0	+12.6
Chemicals and oils.....	153	73	85	89	110	91	93	109	+17.2	-10.9
UNFILLED ORDERS										
Total.....	157	67	72	72	70	77	75	75	0.0	+7.1
Textiles.....	154	62	85	85	87	69	66	70	+6.1	-19.5
Iron and steel.....	157	66	65	66	65	75	75	75	0.0	+15.4
Transportation equipment.....	204	53	72	66	62	68	60	60	0.0	-3.2
Lumber.....	142	56	74	72	67	91	88	84	-3.4	+26.9
WHOLESALE TRADE										
Grand total, all classes.....	124	82	88	111	112	87	109	110	+0.9	-1.8
Groceries.....	119	86	92	97	102	92	101	101	0.0	-1.0
Meats.....	130	87	104	111	117	113	118	130	+10.2	+11.1
Dry goods.....	128	71	81	125	113	74	110	105	-4.5	-7.1
Men's clothing.....	167	43	78	165	140	68	148	137	-7.4	-2.1
Women's clothing.....	188	26	43	98	95	46	92	88	-4.3	-7.4
Boots and shoes.....	128	68	107	122	127	98	119	110	-7.6	-13.4
Hardware.....	118	82	90	98	106	90	96	100	+4.2	-5.7
Drugs.....	125	88	100	110	122	102	115	119	+3.5	-2.5
Furniture.....	131	72	84	111	117	78	108	131	+21.3	+12.0
RETAIL TRADE										
MAIL-ORDER HOUSES (4 houses).....	156	64	93	105	118	112	127	143	+12.6	+21.2
CHAIN STORES:										
Ten-cent.....	250	62	121	130	128	128	133	144	+8.3	+12.5
Grocery.....	224	77	166	170	171	198	205	200	-2.4	+17.0
Wearing apparel.....	350	47	157	165	198	180	197	246	+24.9	+24.2
Drug.....	169	82	141	140	137	164	169	164	-3.0	+19.7
Cigar.....	160	79	111	106	106	100	104	105	+1.0	-0.9
Candy.....	161	70	112	110	119	117	123	122	-0.8	+2.5
Shoe.....	163	55	109	101	108	116	109	130	+19.3	+20.4
DEPARTMENT STORES:										
Sales.....	186	71	75	89	100	78	85	106	+24.7	+6.0
Stocks.....	117	83	94	97	107	92	96	101	+5.2	-5.6

INDEXES OF BUSINESS—Continued

Relative to 1923-1925 monthly average as 100	Maximum since Jan. 1, 1923	Minimum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			July	August	September	July	August	September	Sept., 1928, from Aug., 1928	Sept., 1928, from Sept., 1927
EMPLOYMENT										
Number employed, by industries:										
Total, all classes.....	109	90	93	93	94	90	92	93	+1.1	-1.1
Food products.....	112	90	94	93	97	92	91	94	+3.3	-3.1
Textiles.....	114	85	91	92	94	85	86	87	+1.2	-7.4
Iron and steel.....	114	87	93	93	92	92	93	94	+1.1	+2.2
Lumber.....	107	80	87	88	89	83	85	85	0.0	-4.5
Leather.....	112	86	94	97	97	89	91	91	0.0	-6.2
Paper and printing.....	106	97	102	102	103	101	101	102	+1.0	-1.0
Chemicals.....	111	88	94	94	98	90	91	98	+7.7	0.0
Stone, clay, and glass.....	107	85	96	97	97	92	95	95	0.0	-2.1
Metal products other than iron and steel.....	110	87	93	93	92	93	94	95	+1.1	+3.3
Tobacco products.....	108	82	89	82	92	81	87	89	+2.3	-3.3
Vehicles.....	110	82	88	89	88	95	98	99	+1.0	+12.5
Miscellaneous.....	115	86	101	100	98	93	94	95	+1.1	-3.1
Amount of pay roll, by industries:										
Total, all classes.....	111	85	94	96	95	92	95	97	+2.1	+2.1
Food products.....	108	90	98	97	99	97	95	98	+3.2	-1.0
Textiles.....	115	78	91	94	96	82	84	87	+3.6	-9.4
Iron and steel.....	117	79	92	94	92	94	98	98	0.0	+6.5
Lumber.....	107	84	91	94	95	87	89	91	+2.2	-4.2
Leather.....	117	77	94	101	98	87	92	91	+1.1	-7.1
Paper and printing.....	114	94	106	108	109	108	108	110	+1.9	+0.9
Chemicals.....	114	89	99	100	102	97	98	102	+4.1	0.0
Stone, clay, and glass.....	111	84	96	99	98	92	98	96	-2.0	-2.0
Metal products other than iron and steel.....	114	81	90	92	89	92	99	100	+1.0	+12.4
Tobacco products.....	111	81	90	84	95	82	86	90	+4.7	-5.3
Vehicles.....	114	79	87	92	87	95	101	101	0.0	+16.1
Miscellaneous.....	119	86	105	102	98	96	96	98	+2.1	0.0
PRICE INDEX NUMBERS										
FARM PRICES										
(Relative to 1909-1914 average as 100)										
All groups.....	152	125	130	132	140	145	139	141	+1.4	+0.7
Grains.....	178	108	139	138	134	142	120	117	-2.5	-12.7
Fruits and vegetables.....	253	108	195	172	145	156	137	127	-7.3	-12.4
Meat animals.....	162	98	131	136	142	157	162	174	+7.4	+22.5
Dairy and poultry.....	166	122	125	127	137	134	136	145	+6.6	+5.8
Cotton and cottonseed.....	252	81	125	136	179	170	153	142	-7.2	-20.7
Unclassified.....	108	79	81	81	87	88	87	85	-2.3	-2.3
WHOLESALE PRICES										
Department of Labor Indexes										
(Relative to 1926 monthly average as 100)										
All commodities.....	105	94	94	95	97	98	99	100	+1.0	+3.1
Farm products.....	114	94	98	102	106	107	107	109	+1.9	+2.8
Food, etc.....	107	85	94	94	97	102	104	107	+2.9	+10.3
Hides and leather products.....	127	98	112	112	113	124	121	121	0.0	+7.1
Textile products.....	114	94	94	96	99	97	96	96	0.0	-3.0
Fuel and lighting.....	112	81	84	84	84	83	85	85	0.0	+1.2
Metals and metal products.....	113	97	98	98	98	99	100	101	+1.0	+3.1
Building materials.....	116	90	94	93	92	94	95	95	0.0	+3.3
Chemicals.....	104	95	95	95	96	95	95	95	0.0	-1.0
House-furnishing goods.....	111	97	98	99	99	97	97	97	0.0	-2.0
Miscellaneous.....	127	79	89	90	89	81	79	80	+1.3	-10.1
Classified by state of manufacture:										
Semimanufactured articles.....	128	96	96	97	99	98	97	97	0.0	-2.0
Finished products.....	103	93	94	93	94	98	99	101	+2.0	+7.4
Raw materials.....	109	93	95	98	100	100	99	101	+2.0	+1.0
Nonagricultural commodities.....	106	93	93	93	94	96	97	98	+1.0	+4.3
Commercial Indexes										
(Relative to 1926 monthly average as 100)										
Dun's.....	106	85	99	100	101	103	103	103	0.0	+2.0
Bradstreet's.....	112	95	97	100	103	102	103	102	-1.0	-1.0

INDEXES OF BUSINESS—Continued

Relative to 1923-1925 monthly average as 100	Maximum since Jan. 1, 1923	Minimum since Jan. 1, 1923	1927			1928			PER CENT INCREASE (+) OR DECREASE (-)	
			July	August	September	July	August	September	Sept., 1928, from Aug., 1928	Sept., 1928, from Sept., 1927
PRICE INDEX NUMBERS—Contd.										
COST OF LIVING										
National Industrial Conference Board Indexes										
(Relative to July, 1914)										
All items weighted.....	172	158	162	162	163	161	161	163	+1.2	0.0
Food (Department of Labor).....	167	141	153	152	154	153	154	158	+2.6	+2.6
Shelter.....	186	161	168	169	168	161	161	161	0.0	-4.2
Clothing.....	177	160	169	170	171	174	173	174	+0.6	+1.8
Fuel and light (combined).....	179	156	160	161	162	158	159	160	+0.6	-1.2
Fuel.....	208	174	180	181	183	177	178	180	+1.0	-1.6
Light.....	123	118	122	122	122	121	121	121	0.0	-0.8
Sundries.....	176	171	173	172	172	171	171	171	0.0	-0.6

ADDITIONAL PRELIMINARY RETURNS, CENSUS OF MANUFACTURES, 1927

INDUSTRY	VALUE OF PRODUCTS			PERSONS EMPLOYED			INDUSTRY	VALUE OF PRODUCTS			PERSONS EMPLOYED		
	1927	1925	Per cent increase (!)	1927	1925	Per cent increase (!)		1927	1925	Per cent increase (!)	1927	1925	Per cent increase (!)
	Thousands of dollars			Number				Thousands of dollars			Number		
Artificial leather.....	34,228	40,932	-16.4	2,730	2,659	2.7	Music printing and publishing.....	15,882	15,090	5.2	987	955	3.4
Ammunition and related products..	45,602	41,707	9.3	7,602	7,777	-2.3	Oilcloth.....	17,642	17,843	-1.1	1,072	1,160	-7.6
Billiard and pool tables, bowling alloys and accessories.....	7,042	5,614	26.0	1,176	1,037	13.4	Nets and seines.....	5,401	5,157	4.7	869	885	-1.8
Baskets, rattan and willow ware....	20,960	16,658	25.8	8,594	6,808	26.2	Printing materials, except type and ink.....	7,041	6,525	7.9	885	888	-0.3
Blacking, stains, and dressings.....	22,540	25,055	-10.0	1,710	1,869	-8.5	Roofing tile.....	5,435	5,841	-7.0	1,410	1,302	8.3
Beet sugar.....	104,927	132,339	-20.7	7,402	8,872	-16.6	Rubber boots and shoes.....	124,608	115,935	7.5	26,848	24,999	7.4
Chemical fire extinguishers.....	8,035	8,037	0.0	832	842	-1.2	Sewing machines, cases and attach- ments.....	45,222	46,298	-2.3	11,838	12,121	-2.3
Combs and hairpins.....	4,329	5,270	-17.9	1,248	1,300	-4.0	Sandpaper, emery paper, and other abrasive paper and cloth.....	12,232	15,623	-21.7	917	1,230	-25.4
Children's carriages, sleds, etc.....	91,964	85,907	7.0	21,658	20,483	5.7	Hollow building tile.....	25,953	28,452	-8.8	7,929	8,250	-3.9
Envelopes.....	55,904	51,189	9.2	9,725	9,052	7.4	Rubber ties and inner tubes.....	869,688	925,002	-6.0	78,256	81,640	-4.1
Fireworks.....	5,885	6,031	-2.4	1,564	1,446	8.2	Theatrical scenery and stage equip- ment.....	5,745	3,578	60.6	561	391	43.5
Foundry supplies.....	11,635	12,723	-8.6	941	1,087	-13.4	Terra cotta.....	17,450	20,102	-13.2	5,082	5,458	-6.9
Firearms.....	19,452	15,179	28.2	6,130	4,470	37.1	Typewriters, ribbons, and carbon paper.....	69,112	63,080	9.6	16,598	14,969	10.9
Hand stamps, stencils, and brands..	14,210	15,321	-7.3	2,676	2,930	-8.7	Wooden cigar boxes.....	12,909	12,925	-0.1	4,577	4,836	-5.4
Gas meters and water meters.....	36,715	34,292	7.1	5,915	5,514	7.3	Wall paper.....	30,059	30,069	0.0	4,811	5,069	-5.1
Lasts and related products.....	7,529	9,301	-19.1	1,718	2,035	-15.6	Floor and wall tile and similar tile..	27,959	22,455	24.5	9,264	7,704	20.2
Lace goods.....	27,298	30,844	-11.5	6,482	7,006	-7.5							
Lead pencils.....	24,493	25,051	-2.2	5,300	5,636	-6.0							
Lime.....	41,587	50,736	-18.0	10,820	12,095	-10.5							
Linoleum and asphalted-felt-base covering.....	81,543	77,532	5.2	7,805	7,336	6.4							

¹ A minus (-) denotes decrease.

TREND OF BUSINESS MOVEMENTS

The following table contains a summary of the monthly figures, designed to show the trend in important industrial and commercial movements. These data represent continuations of the figures presented in the latest semiannual number (August, 1928), in which monthly figures for 1927 and 1928 may be found, together with explanations as to the sources and exact extent of the figures quoted. The figures given below should always be read in connection with those explanations. Data on stocks, unfilled orders, etc., are given as of the end of the month referred to. For explanations of relative numbers, including base periods, see introduction on inside front cover.

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	PER CENT INCREASE (+) OR DECREASE (-)		1927	1928	
								Sep- tem- ber, 1928, from August, 1928	Sep- tem- ber, 1928, from Sep- tem- ber, 1927			
TEXTILES												
Wool												
Receipts at Boston:												
Total.....thous. of lbs..	33,331	55,841	54,907	29,720	10,315	36,499	16,956	-65.3	-39.2	296,324	265,532	-10.4
Domestic.....thous. of lbs..	25,843	50,082	51,346	25,802	7,156	29,891	11,799	-72.3	-39.4	192,390	189,308	-1.6
Foreign.....thous. of lbs..	7,488	5,759	3,561	3,918	3,159	6,608	5,157	-19.4	-38.7	103,934	76,224	-26.7
Imports:												
In condition imported.....thous. of lbs..	25,040	19,671	18,289	14,472	14,510	18,425	15,832	+0.3	-8.4	207,503	187,993	-9.4
Grease equivalent.....thous. of lbs..	28,163	21,383	19,805	16,078	17,015	21,754	18,933	+5.8	-10.1	235,788	211,163	-10.4
Consumption by textile mills, grease equivalent.....thous. of lbs..	43,911	41,282	38,099	45,103	43,492	46,504	48,153	-3.6	-9.7	414,394	390,910	-5.7
Machinery, activity, hourly:												
Looms—												
Wide.....per ct. of hours active..	60	59	53	55	59	59	64	+7.3	-7.8			
Narrow.....per ct. of hours active..	53	58	49	48	53	65	65	+10.4	-18.5			
Carpet and rug.....per ct. of hours active..	65	62	55	63	62	57	65	-1.6	-4.6			
Sets of cards.....per ct. of hours active..	80	81	78	77	85	79	84	+10.4	+1.2			
Combs.....per ct. of hours active..	64	63	59	65	74	83	81	+13.8	=8.6			
Spinning spindles—												
Woolen.....per ct. of hours active..	79	78	75	74	80	78	82	+8.1	-2.4			
Worsteds.....per ct. of hours active..	55	49	50	58	62	65	71	+6.9	-12.7			
Prices:												
Raw, territory, fine, scoured.....dolls. per lb..	1.18	1.18	1.17	1.14	1.14	1.12	1.12	0.0	+1.8			
Raw, Ohio and Pa. fleeces, 1/4 blood, combing, grease.....dolls. per lb..	.55	.55	.55	.54	.54	.44	.45	0.0	+20.0			
Worsted yarn.....dolls. per lb..	1.58	1.58	1.60	1.60	1.58	1.35	1.38	-1.2	+14.5			
Women's dress goods, French serge, 39-in.....dolls. per yd..	1.03	1.03	1.03	1.03	.99	.98	.98	-3.9	+1.0			
Suiting, 13-oz.....dolls. per yd..	2.008	2.008	2.008	2.008	2.008	1.913	1.913	0.0	+5.0			
Cotton												
Production, crop estimate.....thous. of bales..					² 13,993		³ 12,789					
Ginnings.....thous. of bales..					⁴ 8,147		⁴ 8,118					
Receipts into sight.....thous. of bales..	693	297	339	509	2,027	832	2,000	+298.2	+1.4	8,968	6,825	-23.9
Imports, unmanufactured.....bales..	19,842	14,587	18,473	25,258	18,508	28,041	⁵ 28,347	-26.7	-34.7	321,926	235,942	-26.7
Exports, unmanufactured (incl. linters), bales..	591,345	457,781	341,849	259,489	814,569	340,311	631,041	+213.9	+29.1	6,582,070	4,928,505	-25.1
Consumption by textile mills.....bales..	577,710	510,565	438,743	526,729	492,221	634,520	⁵ 627,784	-6.6	-21.6	5,625,973	4,808,671	-14.5
Stocks, domestic, end of month:												
Total, mills and w'houses.....thous. of bales..	3,637	2,805	2,197	1,971	3,366	3,294	⁵ 5,081	+70.8	-33.8			
Mills.....thous. of bales..	1,331	1,159	1,007	782	720	1,121	⁶ 1,116	-7.9	-35.5			
Warehouses.....thous. of bales..	2,305	1,646	1,190	1,189	2,646	2,173	⁶ 3,965	+122.5	-33.3			
Stocks, world visible, end of month:												
Total.....thous. of bales..	5,630	4,962	4,056	3,480	4,114	4,480	5,356	+18.2	-23.2			
American.....thous. of bales..	3,533	2,910	2,165	1,790	2,563	3,131	4,108	+43.2	-37.6			
Prices:												
To producer, all grades.....dolls. per lb..	.201	.197	.210	.188	.176	.171	.225	-6.4	-21.8			
In New York, middling.....dolls. per lb..	.217	.214	.215	.193	.185	.203	.218	-4.1	-15.1			
Cotton Yarn												
Machinery activity of spindles:												
Active spindles.....thousands..	29,060	28,624	28,228	28,244	28,277	32,292	⁷ 32,398	+0.1	-12.7			
Total activity.....millions of hours..	7,959	7,248	6,259	7,431	6,961	8,973	8,761	-6.3	-20.5			
Activity per spindle.....hours	222	203	176	209	196	245	240	-6.2	-18.3			
Ratio to capacity.....per cent.	⁸ 95.1	⁸ 88.4	⁸ 79.7	87.7	90.6	103.5	⁸ 106.6	+3.3	-15.0			
Carded sales yarn:												
Production.....thous. of lbs..	16,358	19,415	12,522	14,046	18,839	13,286	17,618	+34.1	+6.9		158,091	
Stocks, end of month.....thous. of lbs..	13,427	12,539	12,350	11,574	10,248	9,393	8,570	-11.5	+19.6			
Unfilled orders, end of mo.....thous. of lbs..	28,484	25,435	24,619	27,044	34,836	24,415	24,124	+28.8	+44.4			
Prices:												
22/1 cones, Boston.....dolls. per lb..	.380	.374	.384	.369	.358	.387	.406	-3.0	-11.8			
40/l's, southern spinning.....dolls. per lb..	.480	.489	.515	.514	.501	.512	.547	-2.5	-8.4			
Cotton Goods												
Cotton textiles:												
Production.....thous. of yds..	349,325	287,818	221,826	302,470	253,688	245,605	346,902	-16.1	-26.9		2,657,149	
New orders.....thous. of yds..	269,845	267,025	187,439	340,810	387,151	255,992	333,607	+13.6	+16.1		2,587,684	
Shipments.....thous. of yds..	326,244	270,342	217,540	324,073	273,110	221,915	346,199	-14.2	-19.7		2,576,405	
Stocks, end of month.....thous. of yds..	441,508	458,984	463,270	441,667	417,245	201,217	201,920	-5.5	+106.6			
Unfilled orders, end of mo.....thous. of yds..	305,645	302,328	272,227	288,964	398,005	491,960	479,368	+37.7	-17.0			
Fine cotton goods, production.....pieces	128,604	134,158	80,358	136,237	113,627	486,395	496,697	-16.6	-77.1	4,362,769	2,141,133	-50.9
Cotton cloth:												
Imports.....thous. of sq. yds..	5,722	4,615	3,490	3,753	3,139	4,996	4,741	-16.4	-33.8	47,945	47,343	-1.3
Exports.....thous. of sq. yds..	43,011	46,534	44,951	43,928	34,694	46,387	50,333	-21.0	-31.1	421,974	363,529	-13.9
Fabrics for tire manufacture, consumption.....thous. of lbs..	19,168	19,646	20,947	21,854		16,323	13,998			⁹ 125,661	⁹ 151,743	+20.8
Elastic webbing, shipments.....thous. of dolls.	1,415	1,384	1,211	1,399	1,478						12,379	
Prices:												
Print cloth, 64 x 60.....dolls. per yd..	.079	.077	.079	.075	.074	.084	.089	-1.3	-16.9			
Sheeting, brown.....dolls. per yd..	.092	.091	.092	.091	.089	.098	.110	-2.2	-19.1			
Cotton goods (Fairchild), rel. to 1911-1913.	164	162	165	163	160	162	177	-1.8	-9.6			

¹ As of Oct. 1, 1928.² Final estimate for 1927.⁴ As of Oct. 18.⁵ Revised.⁶ Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
TEXTILES—Continued												
Cotton Finishing												
White, dyed and printed (outside mills):												
Billings, finished goods.....thous. of yds..	73,539	70,029	58,685	70,748	69,805	84,780	84,899	-1.3	-17.8	772,879	655,447	-15.2
New orders, gray yardage.....thous. of yds.	72,961	61,347	62,310	71,743	74,483	82,407	87,386	+3.8	-14.8	784,320	647,337	-15.3
Shipments, finished goods.....cases	47,855	42,357	40,500	46,283	45,787	52,399	52,316	-1.1	-12.5	455,005	411,043	-9.7
Stocks, finished goods, end mo.....cases	40,449	38,907	37,958	35,819	33,410	37,092	37,053	-6.7	-9.8			
Operating activity.....per ct. of capacity	62	53	51	54	61	72	72	+13.0	+3.1			
Unfilled orders, end of month.....days	4.3	3.6	3.8	4.4	5.0	5.8	5.8	+13.6	-13.8			
Printed only (mills and outside):												
Production.....thous. of yds.	73,520	63,796	49,996	54,495	66,079	51,688	58,673	+21.3	+12.6		566,830	
Stocks, end of month.....thous. of yds.	76,149	79,416	75,977	74,682	75,161			+0.6				
Silk												
Imports, raw.....thous. of lbs.	9,133	6,174	5,832	9,320	7,202	9,347	7,625	-22.7	-5.5	64,997	65,009	0.0
Deliveries (consumption).....bales	46,367	46,051	40,931	50,821	47,797	47,042	50,107	-6.0	-4.6	413,248	428,335	+3.7
Stocks, end of month:												
At warehouses.....bales	42,088	41,127	38,866	50,975	50,464	56,618	58,986	-1.0	-14.4			
At manufacturing plants.....bales	23,523	24,746	22,188	24,429	22,786	22,218	22,100	-6.7	+3.1			
Silk machinery activity:												
Broad looms.....per cent of normal	90.8	97.4	93.0	89.8	92.7	86.8	81.9	+3.2	+13.2			
Narrow looms.....per cent of normal	56.7	55.4	52.1	54.1	54.0	51.9	50.8	-0.2	+6.3			
Spinning spindles.....per cent of normal	56.9	57.1	62.7	52.1	66.9	73.4	77.1	+28.4	-13.2			
Prices:												
Raw, Japanese, 13-15, N. Y.....dolls. per lb.	4.998	4.851	4.851	4.851	5.096	5.145	5.096	+5.1	0.0			
Silk goods, composite.....dolls. per yd.	1.19	1.18	1.17	1.16	1.16	1.23	1.20	0.0	-3.3			
Rayon												
Imports.....thous. of lbs.	902	710	659	1,248	924	1,528	1,129	-26.0	-18.2	11,775	8,879	-24.6
Stocks, bonded, end of month.....thous. of lbs.	3,128	3,157	2,949	2,976		1,052	1,875					
Price, 150 denier, A grade, N. Y.....dolls. per lb.	1.50	1.50	1.50	1.50	1.50	1.50	1.50	0.0	0.0			
Clothing												
Men's and boys' garments cut:												
Suits.....thous. of garments	1,806	1,902	1,911	2,045		2,151	1,839			6 16,950	6 16,128	-4.8
Separate trousers.....thous. of garments	1,658	1,818	1,638	1,895		2,199	1,963			6 17,051	6 15,064	-11.7
Overcoats.....thous. of garments	330	463	535	666		710	729			6 3,450	6 3,022	-12.4
Overalls:												
Cut.....thous. of dozen garments	370	367	346	407							6 2,935	
Net shipments.....thous. of dozen garments	323	322	330	368							6 2,552	
Unfilled orders end of mo.....thous. of dozen garments	163	159	169	163								
Hosiery												
Production.....thous. of dozen pairs	3,462	3,292	2,786	3,469		3,807	3,841			6 29,744	6 27,302	-8.2
Net shipments.....thous. of dozen pairs	3,312	3,386	2,963	3,731		4,016	4,355			6 29,135	6 26,729	-8.3
Stocks, end of month.....thous. of dozen pairs	9,030	9,011	8,916	8,648		8,093	7,695					
New orders.....thous. of dozen pairs	3,682	3,573	2,836	3,202		3,892	4,886			6 30,745	6 26,320	-14.4
Unfilled orders, end of mo.....thous. of dozen pairs	4,794	4,900	4,711	4,076		6,018	6,407					
Knit Underwear												
Production.....thous. of dozen garments	1,148	1,113	881	1,098	1,016	1,082	1,055	-7.5	-3.7	9,403	9,776	+4.0
Net shipments.....thous. of dozen garments	1,019	998	942	1,306	1,402	1,369	1,404	+7.4	-4.2	9,697	9,786	+0.9
Stocks, end of mo.....thous. of dozen garments	1,709	1,761	1,658	1,570	1,370	1,434	1,216	-12.7	+12.7			
New orders.....thous. of dozen garments	1,028	894	852	1,236	1,213	1,434	1,241	-1.9	-2.3	10,365	9,699	-6.4
Unfilled orders, end of month.....thous. of dozen garments	2,164	2,053	1,947	1,896	1,696	2,543	2,416	-10.5	-29.8			
Burlaps and Fibers												
Imports:												
Burlap.....thous. of lbs.	58,124	56,913	58,541	47,766	43,617	71,417	40,337	-8.7	+8.1	458,255	505,936	+10.4
Fibers (unmanufactured).....long tons	21,846	19,672	18,449	20,657	21,004	23,768	18,294	+1.7	+14.9	237,942	226,953	-5.0
Pyroxylin Coated Textiles												
Pyroxylin spread.....thous. of lbs.	5,422	5,123	5,038	5,562	4,795	3,581	3,600	-13.8	+33.2	33,077	45,066	+36.2
Shipments billed.....thous. of linear yards	3,991	4,274	3,814	4,201	3,852	2,749	2,901	-8.3	+32.8	24,866	35,011	+40.8
Unfilled orders, end mo.....thous. of linear yards	4,005	4,226	4,194	3,855	4,439	2,387	2,421	+15.1	+83.4			
Cotton Mill Dividends												
Fall River mills (quarterly):												
Total.....thous. of dolls.		7 241			7 217		7 262	-10.0	-17.2	790	705	-10.8
Ratio of capitalization.....per ct. per quarter		7 614			7 594		7 643	-3.3	-7.6			
New Bedford mills (quarterly):												
Total.....thous. of dollars		7 346			7 238		7 588	-31.2	-59.5	1,674	1,181	-29.5
Ratio to capitalization.....per ct. per quarter		7 483			7 335		7 809	-30.6	-58.6			
Fur												
Sales by dealers.....thous. of dollars	12,905	13,840	12,215	12,110	10,244	13,694	13,644	-15.4	-24.9	145,052	107,999	-25.5
Buttons												
Fresh-water pearl buttons:												
Production.....ratio to capacity	48.8	46.8	29.7	43.6	47.7	43.6	51.2	+9.4	-6.8			
Stocks, end of month.....thous. of gross	11,098	11,202	10,847	10,746	10,593	9,555	9,490	-1.4	+11.6			
Ocean pearl buttons:												
Production.....thous. of gross	206	158	110	187	163	171	173	-12.8	-5.8	1,613	1,692	+4.9
Shipments.....thous. of gross	204	187	197	227	241	192	217	+6.2	+11.1	1,860	1,983	+6.6
New orders.....thous. of gross	199	165	163	224	222	208	279	-0.9	-20.4	2,178	2,063	-5.3
Stocks, end of month.....thous. of gross	532	636	646	600	482	533	529	-19.7	-8.9			

4 Revised.

6 Cumulative through Aug. 31.

7 Quarter ending in month indicated.

TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	May	June	July	August	Septem-ber	August	Septem-ber	Sep-tember, 1928, from August, 1928	Sep-tember, 1928, from Sep-tember, 1927	1927	1928	
IRON AND STEEL—Continued												
Machinery—Continued												
Pumps—Continued.												
Steam, power, and centrifugal—												
New orders.....thous. of dolls.	1,428	1,505	1,460	1,579	1,405	1,489	1,178	-11.0	+19.3	13,176	12,782	-3.0
Shipments.....thous. of dolls.	1,518	1,640	1,553	1,520	1,369	1,474	1,221	-10.9	+12.1	12,947	12,643	-2.3
Unfilled orders, end mo. thous. of dolls.	3,239	3,088	2,984	3,023	3,056	3,040	2,950	+1.1	+3.6			
Agricultural machinery and equipment:												
Shipments—												
Total.....rel. to 1923-25.	186.6	219.3	213.7	⁵ 219.7	180.0	177.6	157.2	-18.1	+14.5			
Domestic.....rel. to 1923-25.	186.2	222.4	207.8	⁵ 187.6	147.9	166.8	134.4	-21.2	+10.0			
Foreign.....rel. to 1923-25.	188.3	202.8	244.7	⁵ 387.5	347.3	234.0	277.0	-10.4	+25.4			
Production.....rel. to 1923-25.	145.8	142.4	142.0	⁵ 146.1	146.0	⁵ 115.6	⁵ 106.2	-0.1	+37.5			
Foundry equipment:												
New Orders.....rel. to 1922-24.	335.6	149.1	94.8	278.0	170.0	106.4	80.4	-38.8	+111.4			
Shipments.....rel. to 1922-24.	104.7	129.4	124.8	154.1	129.7			-15.8				
Unfilled orders, end mo. rel. to 1922-24.	344.5	359.3	332.1	467.2	529.5			+13.3				
Stokers, mechanical, sales:												
Quantity.....number	130	⁵ 162	⁵ 186	162	161	160	104	-0.6	+54.8	1,129	1,172	+3.8
Power.....horsepower	38,705	⁵ 42,628	⁵ 58,670	51,572	65,060	60,977	27,843	+26.2	+133.7	407,223	401,318	-1.5
Machine tools:												
New orders.....rel. to 1922-24.	205	215	204	241	265	170	106	+10.0	+150.0			
Shipments.....rel. to 1922-24.	204	193	181	208	205	118	128	-1.4	+60.2			
Unfilled orders, end of mo. rel. to 1922-24.	345	348	420	428	441	278	266	+3.0	+65.8			
Electric hoists:												
New orders—												
Quantity.....number	462	442	394	402	447	278	300	+11.2	+49.0	2,528	3,843	+52.0
Value.....dollars	204,550	181,205	204,636	180,365	228,510	162,594	147,323	+26.7	+55.1	1,280,046	1,790,816	+39.9
Shipments.....dollars	190,174	195,807	177,404	193,248	172,986	128,331	151,674	-10.5	+14.1	1,177,583	1,633,428	+38.7
Electric overhead cranes:												
Shipments.....thous. of dolls.	547	600	463	564	464	729	653	-17.7	-28.9	7,145	4,996	-30.1
New orders.....thous. of dolls.	708	573	733	821	713	483	684	-13.2	+4.2	6,299	5,539	-12.1
Unfilled orders, end of mo. thous. of dolls.	1,671	1,688	1,800	1,952	2,188	2,278	2,273	+12.1	-3.7			
Woodworking machinery:												
New orders.....thous. of dolls.	1,985	1,173	1,247	1,641	1,639	1,207	1,182	-0.1	+38.7	11,513	12,721	+10.5
Shipments.....thous. of dolls.	1,490	1,319	1,264	1,436	1,413	1,214	1,380	-1.6	+2.4	12,060	11,695	-3.0
Shipments.....number of machines	1,082	871	932	1,170	1,050	1,089	1,093	-10.3	-3.9	9,636	8,910	-7.5
Cancellations.....thous. of dolls.	25	44	32	6	26	12	21	+333.3	+23.8	128	228	+78.1
Unfilled orders, end of mo. thous. of dolls.	2,058	1,873	1,838	2,058	2,265	1,200	990	+10.1	+128.8			
Electric industrial trucks and tractors:												
Shipments, domestic—												
Tractors.....number of vehicles	8	6	5	5	11	3	8	+120.0	+37.5	101	82	-18.8
All other types.....number of vehicles	93	96	87	85	102	87	66	+20.0	+54.5	772	863	+11.8
Exports.....number of vehicles	13	14	15	6	5	2	5	-16.7	0.0	83	102	+22.9
Fire-extinguishing equipment, shipments:												
Motor vehicles.....number	107	97	105	125	136	143	122	+8.8	+11.5	1,101	943	-14.4
Hand types.....number	55,033	48,123	48,897	47,490	42,179	48,101	46,255	-11.2	-8.8	448,518	424,625	-5.3
Patents issued:												
Total, all classes.....number	4,248	4,275	3,107	3,390	3,039	3,815	2,792	-10.4	+8.8	31,144	31,249	+0.3
Agricultural implements.....number	56	24	44	29	40	46	37	+37.9	+8.1	456	364	-20.2
Internal-combustion engines.....number	63	42	59	43	42	67	34	-2.3	+23.5	611	456	-25.4
NONFERROUS METALS												
Copper												
Production:												
Mines.....short tons	73,729	73,224	73,426	⁵ 76,952	77,387	67,248	65,936	+0.6	+17.4	625,717	650,658	+4.0
Smelter.....short tons	85,745	88,398	83,875	88,517	85,795	78,245	74,418	-3.1	+15.3	719,360	752,851	+4.7
Refined (N. and S. America).....short tons	129,236	131,024	135,092	143,560	137,018	119,786	119,100	-4.6	+15.0	1,104,387	1,175,297	+6.4
World production, blister.....short tons	153,414	156,474	153,190	158,838	154,518	135,015	133,291	-2.7	+15.9	1,222,132	1,349,795	+10.4
Domestic shipments, refined.....short tons	79,103	81,436	82,245	83,938	88,707	71,736	71,578	+6.4	+23.9	636,099	698,378	+9.8
Exports.....short tons	56,667	50,261	47,855	41,186	36,190	46,571	46,137	-12.1	-21.6	389,804	421,106	+8.0
Stocks (North and South America), end mo.:												
Refined.....short tons	66,288	58,809	54,871	54,793	51,812	93,654	86,493	-5.4	-40.1			
Blister.....short tons	241,755	251,694	257,673	254,433	255,622	253,886	246,517	+0.5	+3.7			
Wholesale price, electrolytic.....dolls. per lb.	.1420	.1453	.1453	.1453	.1472	.1297	.1294	+1.3	+13.8			
Wire Cloth												
Production.....thous. of sq. ft.	431	400	367	430	403	422	409	-6.3	-1.5	4,075	3,912	-4.0
Shipments.....thous. of sq. ft.	407	364	365	387	423	426	417	+9.3	+1.4	3,722	3,681	+1.1
Stocks, end of month.....thous. of sq. ft.	1,134	1,157	1,124	1,120	1,099	1,320	1,242	-1.9	+11.5			
New orders.....thous. of sq. ft.	371	310	346	408	412	413	440	+1.0	-6.4		3,459	
Unfilled orders, end of mo. thous. of sq. ft.	258	185	247	285	320	256	265	+12.3	+20.8			
Make and hold orders, end of month.....thous. of sq. ft.	402	414	405	457	453	398	396	-0.9	+14.4			
Tin												
Deliveries (consumption).....long tons	5,335	6,950	5,545	7,200	6,885	6,895	6,110	-4.4	+12.7	56,285	58,090	+3.2
Stocks, end of month:												
World visible supply.....long tons	17,064	16,231	18,022	18,456	19,924	14,487	15,083	+8.0	+32.1			
United States.....long tons	3,708	2,148	2,878	1,718	3,508	2,201	1,973	+104.2	+77.8			
Imports.....long tons	7,045	5,050	4,772	6,584	8,187	8,560	4,938	+24.3	+65.8	55,192	60,989	+10.5
Wholesale price, Straits, N. Y.....dolls. per lb.	.5154	.4794	.4704	.4801	.4807	.6447	.6149	+0.1	-21.8			
Zinc												
Retorts in operation, end of month.....number	70,260	65,680	62,384	66,428	61,965	76,851	74,435	-6.7	-16.8			
Per cent of total.....per cent	57.2	53.4	53.9	57.4	53.4	57.1	56.6	-7.0	-5.7			
Production.....short tons	53,422	50,825	50,890	52,157	49,361	49,012	47,735	-5.4	+3.4	461,799	468,485	+1.4
Stocks, end of month.....short tons	45,225	44,468	42,210	44,410	47,915	34,587	34,277	+7.9	+59.8			
Ore, Joplin district:												
Shipments.....short tons	50,630	64,531	43,227	43,466	41,429	61,749	55,308	-4.7	-25.1	508,190	427,663	-15.8
Stocks, mines, end of month.....short tons	41,747	32,266	31,679	39,303	48,474	24,934	28,806	+23.3	+68.3			
Price, slab, prime western.....dolls. per lb.	.0603	.0616	.0620	.0625	.0625	.0634	.0621	0.0	+0.6			

⁵ Revised.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	Sep-tember, 1928, from August, 1928	Sep-tember, 1928, from Sep-tember, 1927	1927	1928	
FUELS—Continued												
Petroleum—Continued												
Coke:												
Production.....thous. of short tons..	118	118	127	136	119	95	98	-12.5	+21.4	833	1,037	+24.5
Stocks, end of month.....thous. of short tons..	348	344	385	402	380	304	314	-5.5	+21.0			
Wax:												
Production.....thous. of lbs..	51,072	50,792	45,273	54,084	50,670	41,576	47,888	-6.3	+5.8	432,686	464,690	+7.4
Stocks, end of month.....thous. of lbs..	103,639	91,987	84,476	79,131	84,330	180,645	170,172	-6.6	-50.4			
RUBBER												
Crude Rubber												
World shipments, plantation.....long tons..	43,889	40,927	52,831	55,345	39,732	50,535	48,186	+21.5	+19.3	6 400,760	6 372,706	-7.0
Imports (including latex).....long tons..	31,014	27,764	31,258	32,712	39,732	32,810	33,301			326,745	313,626	-4.0
Consumption by tire mfrs.....thous. of lbs..	51,061	53,159	47,128	62,224		45,706	37,341			6 374,025	6 396,347	+6.0
World stocks, end of month:												
World total.....long tons..	227,597	212,452	208,789	201,188		255,684	260,799					
United States.....long tons..	105,357	90,198	83,242	68,995	68,851	96,148	97,829	-0.2	-29.6			
Europe.....long tons..	48,304	42,290	39,269	35,865		69,109	72,748					
Producing countries.....long tons..	20,116	20,664	21,578	21,828	17,687	27,427	27,822	-19.0	-36.4			
Afloat.....long tons..	53,820	59,300	64,700	74,500		63,000	62,400					
Wholesale price, smoked sheets, New York.....dolls. per pound..	.188	.194	.192	.193	.182	.351	.338	-5.7	-46.2			
Tires and Tubes												
Pneumatic tires:												
Production.....thousands..	5,082	5,030	4,881	5,607		4,334	3,638			6 34,510	6 39,183	+13.5
Stocks, end of month.....thousands..	9,794	9,150	8,396	7,539		8,070	7,325					
Shipments:												
Domestic.....thousands..	4,707	5,162	5,811	6,131		4,666	4,168			6 32,488	6 37,754	+16.2
Export.....thousands..	146	184	121	179		144	136			6 1,425	6 1,212	-14.9
Inner tubes:												
Production.....thousands..	5,382	5,222	5,009	6,264		4,871	4,247			6 37,306	6 41,565	+11.4
Stocks, end of month.....thousands..	13,298	12,892	11,248	10,466		11,023	10,162					
Shipments:												
Domestic.....thousands..	4,631	5,254	6,469	6,759		5,898	4,973			6 38,022	6 39,980	+5.1
Export.....thousands..	100	105	83	132		96	103			6 781	6 775	-0.8
Solid and cushion:												
Production.....thousands..	47	49	46	52		49	36			6 435	6 356	-18.2
Stocks, end of month.....thousands..	156	156	152	149		183	173					
Shipments:												
Domestic.....thousands..	44	45	45	49		45	42			6 367	6 331	-9.8
Exports.....thousands..	4	5	4	5		5	4			6 48	6 32	-33.3
Other Rubber Products												
Rubber-proofed fabrics:												
Production—												
Total.....thous. of yds..	2,744	2,953	3,447	4,613		4,077	4,545			6 22,381	6 23,778	+6.2
Auto fabrics.....thous. of yds..	725	895	763	764		802	756			6 6,471	6 6,144	-5.1
Raincoat fabrics.....thous. of yds..	1,110	1,351	1,951	2,598		2,723	3,123			6 11,902	6 11,013	-7.5
All other.....thous. of yds..	909	707	733	1,251		552	666			6 4,008	6 6,621	+65.2
New orders, auto fabrics.....thous. of yds..	776	884	497	688		876	955			6 6,720	6 6,454	-4.0
Production, relative to capacity...per cent..	27.7		25.9	39.1		30.5	28.7					
Rubber heels:												
Production.....thous. of pairs..	21,597	18,763	17,620	21,289		18,363	18,452			6 120,946	6 157,290	+30.0
Shipments—												
To shoe manufacturers.....thous. of pairs..	8,897	9,166	12,070	11,642		10,624	8,882			6 64,108	6 82,085	+28.0
To repair trade.....thous. of pairs..	7,559	9,022	7,372	9,244		8,676	8,170			6 52,880	6 61,845	+17.0
For export.....thous. of pairs..	884	864	457	729		908	722			6 6,807	6 6,842	+0.5
Stocks, end of month.....thous. of pairs..	52,387	50,569	49,679	49,511		38,849	38,696					
Rubber soles:												
Production.....thous. of pairs..	3,519	3,321	3,168	3,461		2,333	2,634			6 14,229	6 27,203	+91.2
Shipments—												
To shoe manufacturers.....thous. of pairs..	1,855	1,977	1,897	2,209		1,768	1,390			6 10,030	6 15,484	+54.4
To repair trade.....thous. of pairs..	894	948	808	917		849	996			6 3,903	6 7,449	+90.9
For export.....thous. of pairs..	120	41	55	46		119	27			6 670	6 1,889	+181.9
Stocks, end of month.....thous. of pairs..	4,558	4,687	5,067	5,633		3,170	3,068					
Mechanical rubber goods, shipments:												
Total.....thous. of dolls..	6,274	6,126	5,157	6,306		5,863	5,467			6 47,073	6 47,412	+0.7
Belting.....thous. of dolls..	1,352	1,508	1,396	1,888		1,778	1,497			6 12,165	6 11,678	-4.0
Hose.....thous. of dolls..	2,666	2,288	1,795	2,068		1,934	1,963			6 18,868	6 18,040	-4.4
All other.....thous. of dolls..	2,255	2,260	1,966	2,360		2,151	2,007			6 16,142	6 17,703	+9.7
Rubber bands, shipments.....thous. of lbs..	177	192	173	183	186							
Rubber flooring, shipments.....thous. of sq. ft..	661	717	477	583								
HIDES AND LEATHER												
Hides												
Imports:												
Total hides and skins.....thous. of lbs..	61,288	58,091	50,175	47,056	34,448	55,397	43,665	-26.8	-21.1	334,281	414,820	+24.1
Calfskins.....thous. of lbs..	4,387	4,457	4,134	4,053	2,707	5,544	4,545	-33.2	-40.4	33,615	31,863	-5.2
Cattle hides.....thous. of lbs..	36,913	34,168	28,193	26,540	18,504	33,495	25,383	-30.3	-27.1	170,573	234,377	+37.4
Goatskins.....thous. of lbs..	10,082	8,383	7,873	7,951	6,728	6,973	6,485	-15.4	+3.7	63,683	70,462	+10.6
Sheepskins.....thous. of lbs..	6,016	7,323	6,171	6,773	4,902	6,245	4,510	-27.6	+8.7	45,696	50,847	+11.3
Stocks, end of month:												
Total hides and skins.....thous. of lbs..	241,264	244,746	239,877	243,591		239,049	243,327					
Cattle hides.....thous. of lbs..	197,775	196,561	194,668	197,086		180,700	188,797					
Calf and kip skins.....thous. of lbs..	25,961	29,159	25,551	25,758		36,321	33,024					
Sheep and lamb skins.....thous. of lbs..	17,528	19,026	19,658	20,747		22,028	21,506					

* Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
LUMBER PRODUCTS—Continued												
Hardwood Lumber—Continued												
Oak:												
Stocks, total end of month.....mill. ft. b. m.	1,005	1,000	974			939	963					
Stocks, unsold, end of month.....mill. ft. b. m.	844	854	809			737	791					
Unfilled orders, end of month.....mill. ft. b. m.	179	164	182			221	190					
All hardwoods:												
Production.....mill. ft. b. m.	244	236	244			386	398					
Shipments.....mill. ft. b. m.	255	248	263			296	308					
New orders.....mill. ft. b. m.	244	263	262			319	319					
Stocks, total, end of month.....mill. ft. b. m.	2,817	2,817	2,786			2,557	2,610					
Stocks, unsold, end of month.....mill. ft. b. m.	2,305	2,289	2,225			2,014	2,090					
Unfilled orders, end of month.....mill. ft. b. m.	640	620	652			638	601					
Production, 10 species.....M ft. b. m.	2,532,978	2,387,154	2,213,314	2,258,602	1,954,063	2,577,136	2,487,728	-13.5	-21.5	21,174,995	20,413,148	-3.6
Exports, planks, joists, etc.....M ft. b. m.	223,649	220,961	185,368	162,221	170,457	191,704	188,579	+5.1	-9.6	1,651,967	1,726,603	+4.5
Retail yards, Minneapolis district:												
Sales.....M ft. b. m.	14,364	22,081	15,937	17,632	17,860	16,262	14,122	+1.3	+26.5	99,826	114,042	+14.2
Stocks, end of month.....M ft. b. m.	92,064	88,355	87,345	86,807	84,984	87,699	85,970	-2.1	-1.1			
Retail yards, Kansas City district:												
Sales.....M ft. b. m.	6,199	5,200	5,679	6,140	6,497	5,971	5,979	+5.8	+8.7	51,874	51,461	-0.8
Stocks, end of month.....M ft. b. m.	44,758	45,540	44,874	45,326	45,529	43,684	44,396	+0.4	+2.6			
Composite lumber prices:												
Hardwoods.....dolls. per M ft. b. m.	38.39	38.42	40.06	39.98	39.91	42.40	41.64	-0.2	-4.2			
Softwoods.....dolls. per M ft. b. m.	28.39	28.74	28.81	29.00	29.27	29.49	29.74	+0.9	-1.6			
Flooring												
Maple flooring:												
Production.....M ft. b. m.	7,070	7,608	7,784	8,413	7,675	11,557	10,283	-8.8	-25.4	86,374	68,608	-20.6
Shipments.....M ft. b. m.	8,256	8,686	8,311	9,515	7,929	10,939	9,843	-16.7	-19.4	89,115	72,567	-18.6
Stocks, end of month.....M ft. b. m.	27,514	26,271	24,667	23,232	22,554	26,338	25,921	-2.9	-13.0			
New orders.....M ft. b. m.	9,197	7,867	7,466	8,851	7,110	7,344	7,748	-19.7	-8.2	66,446	70,611	+6.3
Unfilled orders, end of month.....M ft. b. m.	11,423	10,500	10,076	10,187	10,106	11,027	9,619	-0.8	+5.1			
Oak flooring:												
Production.....M ft. b. m.	47,785	44,444	46,065	51,529	45,926	40,426	39,498	-10.9	+16.3	347,691	395,663	+13.8
Shipments.....M ft. b. m.	50,256	49,475	47,832	51,860	45,020	38,932	38,084	-13.2	+18.2	343,696	416,459	+21.2
Stocks, end of month.....M ft. b. m.	75,948	71,425	68,851	67,864	68,456	66,253	66,416	+0.9	+3.1			
New orders.....M ft. b. m.	50,295	48,873	45,972	49,427	43,141	36,139	37,430	-12.7	+15.3	333,401	422,645	+26.8
Unfilled orders, end of month.....M ft. b. m.	48,681	49,002	49,912	47,026	47,099	27,036	25,127	+0.2	+87.4			
Doors at Wholesale												
White pine, wholesale:												
Receipts.....number	14,130	16,540	11,687	13,245								
Shipments.....number	19,146	17,002	13,698	16,814								
Stocks, end of month.....number	68,396	59,535	59,231	60,240								
Unsold stock, end of month.....number	46,758	45,015	37,900	49,777								
Fir, wholesale:												
Receipts.....number	12,117	17,290	8,182	14,758								
Shipments.....number	9,010	10,209	9,720	12,549								
Stocks, end of month.....number	47,315	43,658	42,803	48,543								
Unsold stock, end of month.....number	16,726	30,215	30,755	40,126								
Fir, manufacturing plants:												
Production.....number	425,909	393,224	434,299	314,154	273,076			-13.1				
Shipments.....number	371,220	386,636	431,800	344,643	305,555			-11.3				
Stocks, end of month.....number	317,109	293,505	302,990	267,118	238,399			-10.8				
New orders.....number	606,750	221,896	327,387	227,311	237,769			+4.6				
Unfilled orders, end of month.....number	709,500	535,697	470,617	344,094	300,106			-12.8				
Wooden Furniture												
Grand Rapids district:												
Unfilled orders, end of month.....No. of days' production	39	46	54	53	49	53	50	-7.5	-2.0			
New orders.....No. of days' production	32	27	31	30	31	25	30	+3.3	+3.3			
Shipments.....No. of days' production	20	17	22	31	30	27	29	-3.2	+3.5			
Outstanding accounts, end of month.....No. of days' sales	46	44	48	56	65	55	58	+16.1	+12.1			
Cancellations.....per cent of new orders	7.0	10.0	5.0	7.0	9.0	9.0	7.5	+28.6	+20.0			
Plant operation.....per cent of full time	90.0	95.0	88.0	92.0	101.0	98.0	99.0	+9.8	+2.0			
Piano benches and stools:												
New orders (average per firm).....dollars	6,581	5,145	4,662	6,396	9,508	9,597	10,988	+48.7	-13.5	73,349	59,335	-19.1
Unfilled orders, end of month (average per firm).....dollars	2,094	1,372	1,183	2,323	3,012	2,773	3,884	+29.7	-22.5			
Shipments—Value (average per firm).....dollars	6,136	5,812	4,914	5,251	8,343	8,342	9,863	+58.9	-15.4	70,240	56,909	-19.0
Quantity (total).....pieces	7,958	7,474	6,213	6,020	9,826	10,879	12,469	+63.2	-21.2	99,871	71,697	-28.2
Plywood and Veneer												
Plywood:												
New orders.....thous. of sq. ft. of surface	3,350	3,237	2,920	4,239	3,381	2,890	3,415	-20.2	-1.0	27,377	27,205	-0.6
Shipments.....thous. of sq. ft. of surface	2,578	2,713	2,523	2,961	3,177	2,616	3,310	+7.3	-4.0	24,797	25,228	+1.7
Unfilled orders, end of month.....thous. of sq. ft. of surface	3,154	3,504	3,918	5,131	5,469	3,162	3,767	+6.6	+45.2			
Bushel baskets:												
Production.....dozens	261,355	188,021	229,342	243,056		238,388	356,573			1,784,160	1,641,724	-8.0
Shipments.....dozens	198,592	254,432	294,662	262,810		332,048	418,181			1,684,966	1,605,810	-4.7
Stocks end of month.....dozens	609,882	602,983	565,911	570,726		448,526	386,918					
Rotary-cut veneer:												
Receipts.....number of carloads	165	164	181	259	244	122	112	-5.8	+117.9	877	1,454	+65.8
Purchases.....number of carloads	229	244	249	325	193	162	105	-38.8	+89.5	900	1,851	+105.7

* Revised.

* Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
<i>The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"</i>												
STONE, CLAY, AND GLASS PRODUCTS												
Clay Products												
Face brick, averages per plant:												
Production.....thousands.....	796	844	763	890	900	842	798	+1.1	+12.8	6,771	6,463	-4.5
Shipments.....thousands.....	925	876	815	841	850	825	693	+1.1	+22.7	6,245	6,610	+5.8
Stocks, end of month.....thousands.....	2,517	2,495	2,439	2,282	2,523	2,564	2,466	+10.6	+2.3			
Unfilled orders, end of month.....thousands.....	942	950	1,046	989	1,101	1,069	880	+11.3	+25.1			
Common brick:												
Stocks, end of month—												
Burned.....thousands.....	297,212	302,249	408,563	491,088		427,277	489,566					
Unburned.....thousands.....	125,650	130,990	208,202	206,938		178,357	158,701					
Shipments.....thousands.....	225,747	219,522	238,941	218,339		194,971	176,315			1,465,029	1,625,111	+10.9
Unfilled orders, end of month.....thousands.....	273,743	260,970	299,457	221,625		231,637	219,244					
Plants closed down.....number.....	5	3	11	14		10	59					
Price, red. New York.....dolls. per thous.....	13.50	13.50	13.50	13.50	12.50	11.75	11.75	-7.4	+6.4			
Porcelain plumbing fixtures:												
Net new orders.....pieces.....	26,775	13,405	12,976	12,960	9,939		20,046	-23.3				
Shipments.....pieces.....	15,459	19,257	20,253	22,970	16,525		21,870	-28.1				
Unfilled orders, end of month.....pieces.....	103,131	95,246	81,699	65,029	54,583		34,972	-16.1				
Stocks, end of month.....pieces.....	50,819	40,823	48,621	47,690	50,953		25,868	+6.8				
Vitreous china plumbing fixtures:												
New orders.....pieces.....	233,515	227,734	186,428	215,848	181,018	249,169	223,980	-16.1	-18.2	2,065,812	2,405,582	+16.4
Shipments.....pieces.....	288,317	275,292	248,448	267,349	215,544	279,539	235,883	-19.4	-8.6	2,317,947	2,408,859	-3.9
Unfilled orders, end of month.....pieces.....	514,452	496,984	404,874	353,373	318,508	337,956	325,069	-9.9	-2.0			
Stocks, end of month.....pieces.....	448,326	444,884	460,840	478,523	510,864	520,364	518,452	+6.8	-1.5			
Terra cotta, new orders:												
Quantity.....net tons.....	10,857	16,108	14,191	12,058	10,570	15,643	13,440	-12.3	-21.4	114,196	113,707	-0.4
Value.....thous. of dolls.....	1,113	1,558	1,385	1,123	1,005	1,557	1,342	-10.5	-25.1	11,586	10,780	-7.0
Sand-lime brick:												
Production.....thousands.....	22,244	19,133	18,072	21,680		21,300	21,680			130,023	131,914	+1.5
Shipments by rail.....thousands.....	7,752	5,120	6,055	8,284		7,375	6,729			51,704	45,996	-11.0
Shipments by trucks.....thousands.....	18,229	14,437	11,772	13,215		13,294	11,815			84,796	89,454	+5.5
Stocks, end of month.....thousands.....	12,169	11,656	12,591	14,446		12,547	18,689					
Unfilled orders, end of month.....thousands.....	14,445	11,718	11,762	14,503		19,800	16,094					
Portland Cement												
Production.....thous. of bbls.....	17,280	17,469	17,445	18,730	17,856	18,315	17,505	-4.7	+2.0	128,286	131,036	+2.2
Operation.....per ct. of capacity.....	86.6	90.1	87.0	93.1	91.7	94.5	92.3	-1.5	-0.7			
Shipments.....thous. of bbls.....	18,986	18,421	19,901	21,970	20,462	21,411	19,828	-6.9	+3.2	134,998	136,286	+1.0
Stocks, end of month.....thous. of bbls.....	25,984	25,029	22,580	19,328	16,722	16,292	13,996	-13.5	+19.5			
Stocks, clinkers, end of month.....thous. of bbls.....	14,329	12,944	11,707	9,357	7,889	7,887	6,490	-18.9	+16.9			
Wholesale prices, composite.....dolls. per bbl.....	1.683	1.683	1.683	1.683	1.650	1.683	1.683	-2.0	-2.0			
Highways												
Concrete pavements, new contracts:												
Total.....thous. of sq. yds.....	20,695	15,446	13,123	16,889	14,752	13,528	11,581	-12.7	+27.4	101,442	124,465	+22.7
Road.....thous. of sq. yds.....	13,246	8,997	6,984	9,254	9,630	7,445	6,872	+4.1	+40.1	58,666	79,297	+35.2
Federal-aid highways:												
Completed—												
Cost.....thous. of dolls.....	16,706	18,802	8,828	12,145	26,105	15,301	23,354	+114.9	+11.8	112,545	119,531	+6.2
Distance.....miles.....	735	661	483	599	1,169	750	927	+95.2	+26.1	5,272	5,109	-3.1
Under construction, end of month.....miles.....	8,967	9,494	9,497	9,547	9,427	10,005	9,921	-1.3	-5.0	89,056	80,358	-9.8
Plate Glass												
Production, polished.....thous. of sq. ft.....	10,224	10,723	9,346	11,474	10,248	10,616	9,353	-10.7	+9.6	86,668	91,563	+5.6
Glass Containers												
Actual production:												
Quantity.....gross.....	2,688	2,589	2,374	2,686	2,322	2,142	1,999	-13.6	+16.2	19,078	21,942	+15.0
Relation to capacity.....per cent.....	86.7	86.7	77.2	80.9	78.7	69.3	69.6	-2.7	+13.1			
New orders.....gross.....	2,137	2,225	2,008	1,909	2,122	1,850	2,340	+11.2	-9.3	19,706	21,047	+6.8
Shipments.....gross.....	2,729	2,552	2,311	2,654	2,435	2,120	2,325	-8.3	+4.6	19,739	21,887	+10.6
Stocks, end of month.....gross.....	10,076	9,642	9,106	8,467	8,084	8,765	8,606	-4.5	-6.1			
Unfilled orders, end of month.....gross.....	6,192	6,220	6,267	6,297	6,173	6,217	5,925	-2.0	+4.2			
Illuminating Glassware												
Production:												
Total.....number of turns.....	3,368	3,365	1,748	2,985	3,190	2,410	3,609	+6.9	-11.6	25,295	26,657	+5.4
Ratio to capacity.....per ct. of capacity.....	42.1	44.2	22.3	36.5	43.0	32.0	40.7	+17.8	+5.7			
New orders.....per ct. of capacity.....	44.5	41.6	40.2	44.5	44.2	38.3	43.4	-0.7	+1.9			
Shipments.....per ct. of capacity.....	40.0	42.6	26.8	42.5	43.0	31.4	45.7	+1.2	-5.0			
Unfilled orders, end of month.....number of weeks' supply.....	1.1	1.3	1.6	1.8	1.7	1.3	1.5	-5.6	+13.3			
Stocks, end mo.....number of weeks' supply.....	3.7	4.4	4.6	4.3	4.3	3.5	3.6	0.0	+19.4			
CHEMICALS AND OILS												
Chemicals												
Sulphuric acid:												
Exports.....thous. of lbs.....	516	733	774	291	582	517	454	+100.0	+28.2	6,078	5,606	-7.8
Price, wholesale.....dolls. per 100 lbs.....	.78	.78	.78	.78	.78	.75	.75	0.0	+4.0			
Nitrate of soda:												
Imports.....long tons.....	113,722	76,135	28,150	75,318	36,644	71,904	64,753	-51.4	-43.4	547,234	853,558	+56.0
Production in Chile.....metric tons.....	262,400	252,300	264,300	275,000	259,400	142,800	143,700	-5.6	+80.5	978,293	2,301,700	+135.3
Potash salts:												
Imports (commercial).....long tons.....	12,997	14,525	38,461	57,327	43,313	43,572	28,822	-24.4	+50.3	207,847	282,410	+35.9
Production in France												
(K ₂ O content).....metric tons.....	32,000	34,000				32,868	31,800					
Sales in Germany												
(K ₂ O content).....metric tons.....	63,746	99,948	102,608	108,696		84,548	118,629					

* Revised.

* Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
CHEMICALS AND OILS—Continued												
Chemicals—Continued												
Superphosphate (acid phosphate):												
Production..... short tons.....	284,948	299,444	293,250	294,331		5 257,659	267,516			6 1,926,234	6 2,592,414	+34.6
Stocks, end of month..... short tons.....	803,888	1,041,542	1,258,339	1,416,348		3 1,475,101	1,361,529					+30.7
Shipments..... short tons.....	134,970	59,899	64,401	82,876		8 83,611	198,547			6 1,135,182	6 1,483,612	
Fertilizer:												
Exports..... long tons.....	146,480	111,581	98,803	103,575	99,149	100,659	113,322	-4.3	-12.5	1,000,580	963,918	-3.7
Consumption, Southern States..... short tons.....	198,810	47,236	19,251	62,903	138,470	57,485	175,070	+120.1	-20.9	4,207,627	5,231,895	+24.3
Dyes and dyestuffs, exports:												
Vegetable..... thous. of lbs.....	160	272	254	237	157	237	229	-33.8	-31.4	2,613	2,381	-8.9
Coal tar..... thous. of lbs.....	1,898	1,726	8,340	1,335	1,330	2,254	4,469	-0.4	-70.2	20,783	22,705	+9.2
Arsenic												
Crude:												
Production..... short tons.....	1,225	1,703	1,385	2,086		972	1,472			6 9,059	6 11,331	+25.1
Stocks, end of month..... short tons.....	1,876	2,099	2,105	2,999		1,009	1,422					
Refined:												
Production..... short tons.....	713	732	728	803		986	873			6 6,901	6 5,828	-15.5
Stocks, end of month..... short tons.....	2,370	1,916	1,568	1,618		1,346	1,787					
Price index numbers:												
Crude drugs..... rel. to Aug., 1914.....	208	199	197	193	192	192	202	-0.5	-5.0			
Essential oils..... rel. to Aug., 1914.....	159	166	162	161	159	121	203	-1.2	-21.7			
Drugs and pharmaceuticals..... rel. to Aug., 1914.....	169	169	168	164	164	156	156	0.0	+5.1			
Chemicals..... rel. to 1913-14.....	113	113	113	113	113	112	113	0.0	0.0			
Oils and fats..... rel. to 1913-14.....	128	123	123	121	121	127	134	0.0	-9.7			
Wood Chemicals												
Acetate of lime:												
Production—												
United States..... thous. of lbs.....	10,987	9,126	9,340	9,262	8,291	13,125	12,856	-10.5	-35.5	116,525	96,174	-17.5
Canada..... thous. of lbs.....	704	720	443	None	446	172	427		+4.4	6,319	6,609	+4.6
Shipments..... thous. of lbs.....	15,386	10,175	13,302	12,096	12,513	13,587	13,369	+3.4	-6.4	113,146	108,281	-4.3
Canada..... thous. of lbs.....	684	887	882	2,098	348	830	830	-83.4	-58.1	5,234	8,360	+59.7
Stocks, end of month—												
United States..... thous. of lbs.....	16,265	15,128	11,411	8,600	4,130	19,889	19,452	-52.0	-78.8			
Canada..... thous. of lbs.....	3,095	2,848	2,333	140	183	2,222	1,823	+30.7	-90.0			
Exports..... thous. of lbs.....	1,152	215	1,792	1,141	449	283	283	-60.6				
Price, wholesale..... dolls. per cwt.....	3.50	3.50	3.50	3.88	4.00	3.50	3.50	+3.1	+14.3			
Methanol, crude:												
Production—												
United States..... gallons.....	609,604	510,627	518,220	500,687	453,678	574,710	622,594	-9.4	-27.1	5,934,225	5,299,935	-10.7
Canada..... gallons.....	28,505	27,741	14,885	None	18,816	12,058	17,777		+5.8	269,459	265,985	-1.3
Stocks at crude plants, end of month—												
United States..... gallons.....	299,062	289,433	285,139	219,738	193,667	361,657	314,231	-11.9	-38.4			
Canada..... gallons.....	33,357	34,950	38,485	37,933	13,665	27,057	31,824	-64.0	-57.1			
Stocks at refineries and in transit—												
United States..... gallons.....	909,620	558,483	277,077	160,156	164,972	1,408,637	1,467,460	+3.0	-88.8			
Canada..... gallons.....	57,270	73,955	66,518	64,817	38,600	28,610	1,590	-40.4				
Exports..... gallons.....	98,763	66,785	54,535	14,000	32,540	18,796	20,526	+132.4	+58.5	163,084	443,354	+171.9
Wood at chemical plants:												
Consumption—												
United States..... cords.....	59,744	56,829	53,247	51,692	45,437	81,781	79,350	-11.1	-42.7	648,870	535,264	-17.5
Canada..... cords.....	3,530	3,498	1,938	None	2,160	1,154	2,401		-10.0	32,328	33,081	+2.3
Stocks, end of month—												
United States..... cords.....	489,388	501,021	502,576	497,756	500,860	606,910	617,360	+0.6	-18.9			
Canada..... cords.....	74,319	73,900	73,699	73,700	73,759	68,693	66,624	+0.1	+10.7			
Daily capacity—												
Total..... cords.....	3,266	3,266	3,250	3,262	3,266	3,395	3,395	+0.1	-3.8			
Shutdown..... cords.....	299	697	807	1,053	1,113	455	391	+5.7	+184.7			
Methanol, refined:												
Production—												
United States..... gallons.....	557,780	603,247	541,113	436,811	355,353	317,711	441,771	-18.6	-19.6	3,725,198	4,290,945	+15.2
Canada..... gallons.....	30,400	6,200	10,800	14,700	25,396	None	28,293	+72.8	-10.2	213,838	265,446	+24.1
Stocks, end of month—												
United States..... gallons.....	505,299	541,083	444,496	396,730	300,478	428,194	382,876	-24.3	-21.5			
Canada..... gallons.....	55,359	45,733	39,210	26,715	67,314	50,687	58,312	+152.0	+15.4			
Shipments—												
United States..... gallons.....	492,081	596,502	667,549	497,971	415,340	389,033	506,914	-16.6	-18.1	3,892,568	4,441,365	+14.1
Canada..... gallons.....	14,528	11,462	12,672	22,076	33,101	8,440	23,982	+49.9	+38.0	209,168	198,661	-4.9
Price, wholesale, N. Y..... dolls. per gal.....	.46	.46	.47	.48	.48	.58	.55	0.0	-12.7			
Ethyl Alcohol												
Production..... thous. of gals.....	11,043	13,036	16,618	18,764		15,587	14,129			6 105,364	6 106,565	+1.1
Withdrawn for denaturation..... thous. of gals.....	10,468	16,336	14,927	16,128		12,212	14,130			6 94,109	6 95,038	+1.0
Warehouse stocks, end of month..... thous. of gals.....	10,904	6,646	7,351	9,263		11,122	9,838					
Explosives												
(Black powder, permissible, and other high explosives)												
Production..... thous. of lbs.....	32,850	32,625	30,084	35,092	35,310	36,304	36,858	+0.6	-4.2	305,785	289,617	-5.3
Shipments..... thous. of lbs.....	33,511	32,816	29,561	23,039	37,465	35,736	36,964	+62.6	+1.4	305,300	281,655	-7.7
New orders..... thous. of lbs.....	32,163	31,305	27,993	32,268	33,611	34,680	35,304	+4.2	-4.8	294,284	276,782	-5.9
Stocks, end of month..... thous. of lbs.....	16,990	16,732	17,158	18,554	16,274	17,344	17,152	-12.3	-5.1			

* Revised.

* Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
	CHEMICALS AND OILS—Continued											
Naval Stores												
Turpentine (gum):												
Net receipts, southern ports..... barrels.....	39,764	48,111	46,637	42,724	34,312	47,809	45,775	-19.7	-25.0	303,450	250,269	-17.5
Stocks at ports, end of month..... barrels.....	46,741	61,336	69,245	73,304	73,595	58,915	73,019	+0.4	-0.8			
Price, southern, New York.....dolls. per gal.....	.54	.57	.55	.52	.52	.59	.55	0.0	-5.5			
Rosin (gum):												
Net receipts, southern ports..... barrels.....	118,460	148,041	148,250	145,357	116,029	158,514	151,045	-20.2	-23.2	1,014,066	841,152	-17.1
Stocks at 3 ports, end of month..... barrels.....	128,789	165,604	178,225	227,517	230,672	198,883	229,426	+1.4	+0.5			
Price, B, New York.....dolls. per bbl.....	8.15	8.10	9.71	9.59	9.18	10.62	10.08	-4.3	-8.9			
Rosin (wood):												
Production..... barrels.....	36,036	36,054	37,016	37,623	35,473	35,521	34,839	-5.7	+1.8	315,225	314,173	-0.3
Stocks, end of month..... barrels.....	114,160	108,200	112,703	114,074	112,964	71,982	76,327	-1.0	+8.0			
Turpentine (wood):												
Production..... barrels.....	6,350	5,700	6,304	6,274	6,257	6,347	6,562	-0.3	-4.6	60,766	55,000	-9.5
Stocks, end of month..... barrels.....	9,459	8,510	7,786	6,898	6,027	8,256	10,232	-12.6	-41.1			
Pine oil:												
Production..... gallons.....	248,606	191,947	238,767	225,668	211,828	242,050	244,445	-6.1	-13.3	2,116,895	2,053,339	-3.0
Stocks, end of month..... gallons.....	768,195	829,507	824,671	822,813	845,762	524,246	555,818	+2.8	+52.2			
Roofing												
Roofing, felt:												
Production, dry felt..... tons.....	27,521	28,476	25,810	25,574		27,441	27,902			224,266		
Stocks, end of month, dry felt..... tons.....	2,366	2,153	2,798	3,356		3,166	2,907					
Prepared roofing:												
Shipments..... thous. of roof squares.....	3,008	3,236	2,398	2,417		2,992	3,287			24,109		
Fats and Oils												
Total vegetable oils and copra:												
Exports..... thous. of lbs.....	1,996	1,652	1,145	1,444	3,222	1,767	2,086	+123.1	+54.5	50,441	41,827	-17.1
Imports..... thous. of lbs.....	57,049	59,951	53,379	56,364	80,914	50,092	55,985	+43.6	+44.5	520,379	538,669	+3.5
Copra, imports..... short tons.....	21,383	20,488	24,407	19,716	20,754	19,311	21,694	+5.3	-4.3	156,855	165,332	+5.4
Copra or coconut oil:												
Imports..... thous. of lbs.....	15,076	12,671	19,629	12,581	34,008	21,469	25,936	+170.3	+31.1	211,233	192,988	-8.6
Consumption in oleomargarine..... thous. of lbs.....	11,613	11,791	10,642	11,910	14,452	8,840	10,436	+21.3	+38.5	84,367	113,273	+34.3
Oleomargarine:												
Production..... thous. of lbs.....	23,744	23,738	21,444	23,610	28,446	* 20,882	23,495	+20.5	+21.1	197,299	226,390	+14.7
Consumption..... thous. of lbs.....	23,381	23,926	20,490	24,965	29,002	19,387	23,981	+16.2	+20.9	194,781	226,057	+16.1
Animal glues:												
Shipments..... thous. of lbs.....	6,489	5,887	6,621			6,076	6,075			75,320	77,526	+2.9
Production (quarterly)..... thous. of lbs.....	7 26,295				7 20,454		7 23,100	-22.2	-11.5			
Stocks, end of quarter..... thous. of lbs.....	37,680				7 32,843		7 33,063	-12.8	-0.7			
Edible gelatin:												
Production (quarterly)..... thous. of lbs.....	7 4,755				7 1,824		7 2,497	-61.6	-26.0	12,896	12,042	-6.6
Stocks, end of quarter..... thous. of lbs.....	7 9,088				7 7,284		7 7,287	-19.9	-0.2			
Cottonseed												
Cottonseed:												
Receipts at mills..... short tons.....	5,660	16,798	23,923	169,498	869,738	275,505	* 1,031,414	+413.1	-15.7	2,990,554	1,713,301	-42.7
Consumption (crush)..... short tons.....	66,040	39,041	32,339	73,795	420,883	159,856	* 585,275	+470.3	-28.1	3,637,852	2,141,509	-41.1
Stocks at mills, end of month..... short tons.....	52,437	30,194	21,781	117,484	566,530	205,433	* 651,572	+382.2	-13.1			
Cottonseed oil, crude:												
Production..... thous. of lbs.....	24,437	13,445	11,285	20,863	126,594	46,157	* 178,960	+506.7	-29.3	1,095,210	687,626	-37.2
Stocks, end of month..... thous. of lbs.....	47,409	33,509	19,457	15,346	67,951	25,736	* 87,463	+342.8	-22.3			
Cottonseed oil, refined:												
Production..... thous. of lbs.....	61,935	22,779	26,404	19,677	61,350	33,253	* 99,806	+211.8	-38.5	1,015,982	683,300	-32.7
Stocks, end of month..... thous. of lbs.....	480,431	415,428	335,406	236,200	159,629	272,955	* 226,211	-32.4	-29.4			
Price, yellow, prime, N. Y.....dolls. per lb.....	1.06	1.02	1.01	0.99	0.99	1.00	1.07	+5.3	-7.5			
Consumption in oleomarg..... thous. of lbs.....	2,135	2,106	1,867	2,062	2,437	1,745	2,113	+18.2	+15.3	17,979	19,112	+6.3
Cottonseed cake and meal:												
Production..... short tons.....	31,376	18,457	13,769	34,760	185,723	72,264	* 260,110	+434.3	-28.6	1,644,188	978,881	-40.5
Stocks, end of month..... short tons.....	59,745	45,387	32,601	19,794	61,350	44,142	* 108,572	+209.9	-43.5			
Exports..... short tons.....	4,906	143	71	944	22,013	15,122	26,306	+133.2	-16.3	279,599	129,751	-53.6
Flaxseed												
Production, crop estimate..... thous. of bush.....												
Minneapolis and Duluth:					* 22,472		* 26,583					
Receipts..... thous. of bush.....	650	681	320	* 1,163	3,674	717	5,512	+215.9	-33.3	9,887	9,142	-7.5
Shipments..... thous. of bush.....	675	392	272	426	1,260	496	1,102	+195.8	+14.3	4,442	5,254	+18.3
Stocks, end of month..... thous. of bush.....	856	764	411	310	615	589	1,583	+98.4	-61.1			
Imports..... thous. of bush.....	2,156	1,664	1,484	1,068	1,254	1,123	1,716	+17.4	-26.9	17,542	13,460	-23.3
Linseed oil:												
Shipments from Minneapolis..... thous. of lbs.....	17,245	17,196	12,229	13,571	14,443	10,859	12,970	+6.4	+11.4	96,074	131,425	+36.8
Price, New York.....dolls. per lb.....	1.03	1.03	1.00	0.98	0.98	1.07	1.04	0.0	-5.8			
Linseed cake and meal:												
Shipments from Minneapolis..... thous. of lbs.....	16,621	11,421	10,057	16,051	26,257	10,145	19,420	+63.6	+35.2	114,327	187,157	+63.7
Exports..... thous. of lbs.....	45,331	45,135	47,258	52,392	38,772	58,947	52,984	-26.0	-26.8	502,153	419,055	-16.5
FOODSTUFFS												
Wheat												
Production, crop estimate:												
Winter wheat..... thous. of bush.....					* 578,599		* 552,384					
Spring wheat..... thous. of bush.....					* 325,266		* 319,307					
Total, wheat..... thous. of bush.....					* 903,865		* 871,691					
Visible supply, end of month:												
United States..... thous. of bush.....	50,381	40,480	55,362	92,108	114,523	67,273	84,630	+24.3	+35.3			
Canada..... thous. of bush.....	112,054	99,228	72,891	32,728	78,069	28,264	22,958	+138.5	+240.1			

* As of Oct. 1, 1928.

* Final estimate for 1927.

* Revised.

* Quarter ending in month indicated.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per cent. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
FOODSTUFFS—Continued												
Wheat—Continued												
Receipts, principal markets...thous. of bush.	25,922	15,544	72,618	84,221	73,322	81,632	79,740	-12.9	-8.0	336,667	361,869	+7.5
Shipments, principal markets...thous. of bush.	27,912	14,840	33,543	46,105	39,508	46,583	50,374	-14.3	-21.6	210,647	218,115	+3.5
Exports:												
United States—												
Wheat only...thous. of bush.	4,823	5,006	4,153	10,394	17,939	23,418	33,775	+72.6	-46.9	111,423	56,010	-49.7
Including wheat flour...thous. of bush.	8,624	8,093	7,064	14,588	22,528	28,150	39,536	+54.4	-43.0	151,258	93,943	-37.9
Canada—												
Wheat only...thous. of bush.	30,282	21,960	32,426	25,057	26,923	12,197	14,071	+7.4	+91.3	138,019	197,237	+42.9
Including wheat flour...thous. of bush.	34,268	25,182	35,944	² 29,220	30,928	14,510	17,118	+5.8	+80.7	166,176	230,914	+39.0
Prices:												
No. 2, red winter, Chicago...dolls. per bush.	1.90	1.65	1.52	1.33	1.40	1.40	1.32	+5.3	+6.1			
No. 1, northern spring, cash, Minneapolis...dolls. per bush.	1.502	1.376	1.300	² 1.210	1.201	1.427	1.323	-0.7	-9.2			
Wheat Flour												
Grinding of wheat:												
United States...thous. of bush.	39,910	35,633	39,077	² 47,528	47,734	44,099	48,131	+0.4	-0.8	363,572	377,059	+3.7
Canada...thous. of bush.	7,138	6,394	6,769	7,330		5,276	6,925			⁶ 42,954	⁶ 55,063	+28.2
Production:												
United States, actual...thous. of bush.	8,604	7,665	8,416	² 10,341	10,450	9,617	10,470	+1.1	-0.2	79,392	81,539	+2.7
United States, prorated...thous. of bbls.	9,960	8,854	9,409	11,563		10,458	11,816			⁶ 77,242	⁶ 80,794	+4.6
Canada...thous. of bbls.	1,541	1,359	1,458	1,590		1,158	1,528			⁶ 10,282	⁶ 11,922	+16.0
Production, grain offal...thous. of lbs.	705,781	636,308	688,711	² 817,831	815,561	761,468	833,108	-0.3	-2.1	6,270,690	6,614,814	+5.5
Capacity operated, flour mills...per cent.	50	44	51	53	66	54	64	+13.8	+3.1			
Consumption (computed)...thous. of bbls.	9,515	8,269	7,762	10,431		8,906	9,346			⁶ 69,071	⁶ 72,087	+4.4
Stocks, all positions, end of month (computed)...thous. of bbls.	6,300	6,200	7,847	7,400		7,300	8,490					
Exports:												
United States...thous. of bbls.	845	686	647	932	1,020	1,052	1,281	+9.4	-20.4	8,849	8,430	-4.7
Canada...thous. of bbls.	886	716	782	925	890	514	677	-3.8	+31.5	6,257	7,484	+19.6
Wholesale prices:												
Standard patents, Minn...dolls. per bbl.	8.49	7.95	7.36	6.62	6.59	7.60	7.07	-0.5	-6.8			
Winter, straights, Kansas City...dolls. per bbl.	7.63	7.18	6.44	5.66	5.65	6.77	6.64	-0.2	-14.9			
Corn												
Production, crop estimate...thous. of bush.					² 2,903,272		² 2,786,228					
Exports, including meal...thous. of bush.	1,186	1,045	891	1,018	668	23,459	571	-34.4	+17.0	12,372	17,648	+42.4
Visible supply, end of month...thous. of bush.	27,554	17,451	12,479	9,985	7,114	23,805	25,110	-28.8	-71.7			
Receipts, principal markets...thous. of bush.	23,708	18,771	23,742	21,467	19,658	16,758	22,116	-8.4	-11.1	174,905	248,091	+41.8
Shipments, prin. markets...thous. of bush.	23,454	20,221	16,080	15,778	11,949	11,762	12,257	-24.3	-2.5	101,108	172,989	+71.1
Grindings (starch, glucose)...thous. of bush.	6,921	6,427	5,843	5,193	6,541	7,309	7,561	+26.0	-13.5	62,571	65,112	+4.1
Price, No. 2, Chicago...dolls. per bush.	1.07	1.03	1.08	.97	.99	1.09	.99	+2.1	0.0			
Oats												
Production, crop estimate...thous. of bush.					² 1,452,966		² 1,195,006					
Receipts, principle markets...thous. of bush.	14,406	7,144	6,610	27,271	14,375	21,413	17,223	-47.3	-16.5	112,179	118,379	+5.5
Visible supply, end of month...thous. of bush.	7,319	3,392	1,954	15,687	18,004	22,501	26,430	+14.8	-31.9			
Exports, including meal...thous. of bush.	465	78	104	2,403	2,308	1,398	647	-4.0	+256.7	8,935	7,157	+19.9
Price, contract grades, Chi...dolls. per bush.	.69	.71	.61	.39	.43	.48	.49	+10.3	-12.2			
Grindings, Canada...thous. of bush.	887	753	723	988		791	1,107			⁶ 50,122	⁶ 66,215	+32.1
Production, oatmeal and rolled oats, Canada...thous. of lbs.	11,520	9,974	9,320	5,968		9,785	13,357			⁶ 68,060	⁶ 79,792	+17.2
Barley												
Production, crop estimate...thous. of bush.					² 350,593		² 265,577					
Receipts, principal markets...thous. of bush.	3,031	2,652	2,217	23,611	21,710	11,108	15,547	-8.1	+39.6	42,746	71,848	+68.1
Visible supply, end of month...thous. of bush.	1,435	711	685	6,313	8,084	3,532	4,900	+28.1	+65.0			
Exports...thous. of bush.	1,386	1,910	2,242	8,758	14,830	4,256	6,830	+69.3	+117.1	22,914	33,822	+47.6
Price, fair to good, malting, Chicago...dolls. per bush.	1.04	.96	.83	.73	.67	.80	.88	-8.2	-19.3			
Rye												
Production, crop estimate...thous. of bush.					² 43,274		² 58,572					
Receipts, principal markets...thous. of bush.	1,593	781	571	2,636	6,001	4,293	10,512	+127.7	-42.9	27,250	17,547	-35.6
Visible supply, end of month...thous. of bush.	1,696	1,465	1,146	1,440	1,926	3,083	2,207	+33.8	-12.7			
Exports, including flour...thous. of bush.	3,345	1,297	195	709	2,471	1,325	7,743	+248.5	-68.1	25,550	9,673	-62.1
Price, No. 2, Chicago...dolls. per bush.	1.32	1.26	1.13	.98	1.00	.97	.97	+2.0	+3.1			
Total Grains												
Total grain exports, incl. flour...thous. of bush.	15,006	12,423	10,496	27,476	42,805	35,589	55,327	+55.8	-22.6	222,032	158,204	-28.7
Rice												
Production, crop estimate...thous. of bush.					² 38,833		² 40,231					
Southern paddy, receipts at mills...bbls.	351,607	129,752	10,892	338,269	1,197,924	792,345	1,167,281	+357.2	+2.6	5,391,784	5,254,968	-2.5
Shipments:												
Total from mills...pockets (100 lbs.)	909,718	531,073	285,155	346,076	777,583	423,559	849,908	+124.7	-8.5	6,264,632	6,668,504	+6.4
New Orleans...pockets (100 lbs.)	203,261	115,399	35,274	96,643	147,464	109,951	195,155	+52.6	-24.4	1,396,592	1,356,886	-2.8
Stocks, end of month...pockets (100 lbs.)	1,455,366	1,067,092	829,608	695,660	1,108,564	1,235,674	1,581,097	+59.4	-29.9			
Exports...pockets (100 lbs.)	380,725	291,287	189,472	126,068	152,906	112,232	132,903	+20.7	+15.1	2,469,428	2,614,254	+5.9
Imports...pockets (100 lbs.)	27,452	14,815	31,688	6,026	15,412	19,503	27,217	+155.8	-44.4	422,652	280,683	-33.6

² As of Oct. 1, 1928.³ Final estimate for 1927⁵ Revised.⁶ Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 23 to 137 of the August, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
	FOODSTUFFS—Continued											
Other Crops												
Apples:												
Production, crop estimate, thous. of bush.						177,560	123,455					
Cold-storage holdings, end of month, thous. of bbls.	599	None.	None.	84	1,442	33	1,038	+38.9	+38.9			
Car-lot shipment, carloads.	1,803	1,040	3,369	4,170	18,055	3,352	11,039	+333.7	+63.8	44,405	44,576	+0.4
Potatoes:												
Production, crop estimate, thous. of bush.						463,722	402,149					
Car-lot shipments, carloads.	22,955	29,152	20,972	15,538	20,267	17,418	23,674	+30.4	-14.4	175,017	191,240	+9.3
Onions, car-lot shipments, carloads.	4,133	1,200	1,652	2,561	6,009	2,313	4,473	+134.6	+34.3	21,456	25,875	+20.6
Citrus fruits, car-lot shipments, carloads.	8,350	5,134	5,070	4,254	3,636	4,492	3,853	-14.5	-5.6	80,765	63,323	-21.6
Hay, all tame:												
Production, crop estimates, thous. of tons.						292,688	106,219					
Hay, receipts, tons.	42,955	43,622	43,770	59,774	64,511	51,652	64,440	+7.9	+0.1	519,808	484,509	-6.8
Cattle and Beef												
Cattle movements, primary markets:												
Receipts, thousands.	1,799	1,558	1,650	1,829	2,191	2,065	1,988	+19.8	+10.2	16,092	15,463	-3.9
Shipments, total, thousands.	682	594	608	814	1,067	802	906	+31.1	+17.8	6,029	6,139	+1.8
Shipments, stocker and feeder, thousands.	283	184	196	336	563	269	407	+67.6	+38.3	2,003	2,417	+20.7
Local slaughter, thousands.	1,120	963	1,013	1,007	1,069	1,231	1,085	+6.2	-1.5	9,948	9,166	-7.9
Beef products:												
Production, inspected, thous. of lbs.	422,916	406,060	375,745	398,056	418,882	465,597	453,993	+5.2	-7.7	3,938,748	3,519,763	-10.6
Apparent consumption, thous. of lbs.	435,397	412,257	381,747	407,512	436,753	470,490	455,239	+7.2	-4.1	4,011,550	3,607,253	-10.1
Exports, thous. of lbs.	1,165	1,392	1,510	1,519	647	1,899	1,609	-57.4	-59.8	16,011	10,337	-35.4
Cold-storage holdings, end of month, thous. of lbs.	37,212	32,238	32,442	31,065	37,428	33,446	35,878	+20.5	+4.3			
Prices:												
Cattle, corn-fed, Chicago, dolls. per 100 lbs.	13.18	13.56	14.99	15.11	16.19	12.58	13.31	+7.1	+21.6			
Steer rounds, No. 2, dolls. per lb.	.201	.212	.229	.244	.259	.203	.199	+6.1	+30.2			
Western dressed steers, N. Y., dolls. per lb.	.229	.225	.249	.260	.284	.200	.213	+9.2	+33.3			
Hogs and Pork												
Hog movements, primary markets:												
Receipts, thousands.	3,723	3,548	2,924	2,523	2,602	3,041	2,565	+3.1	+1.4	30,496	34,015	+11.5
Shipments, total, thousands.	1,296	1,299	1,193	1,160	1,093	1,192	1,051	-5.8	+4.0	11,139	12,845	+15.3
Shipments, stocker and feeder, thousands.	66	56	45	43	55	38	48	+27.9	+14.6	636	560	-11.9
Local slaughter, thousands.	2,420	2,269	1,719	1,363	1,502	1,846	1,512	+10.2	-0.7	19,335	21,142	+9.3
Pork products, total:												
Production, inspected, thous. of lbs.	672,640	704,468	537,820	466,696	434,296	580,606	458,919	-6.9	-5.4	5,843,002	6,244,424	+6.9
Apparent consumption, thous. of lbs.	616,624	598,167	560,122	550,185	588,433	595,110	576,349	+7.0	+2.1	4,892,661	5,377,140	+9.9
Exports, thous. of lbs.	85,201	82,936	84,290	81,924	65,617	72,958	89,829	-19.9	-27.0	756,379	811,138	+7.2
Cold-storage holdings, end of month, Total, thous. of lbs.	1,105,439	1,129,839	1,024,124	859,903	642,016	933,436	726,941	-25.3	-11.7			
Fresh and cured, thous. of lbs.	919,366	915,360	819,185	682,015	515,206	766,418	608,767	-24.5	-15.4			
Lard (included in pork products):												
Production, thous. of lbs.	140,414	146,520	108,522	92,401	50,658	117,871	89,704	-8.9	-22.7	6,108,501	6,177,895	+6.3
Exports, thous. of lbs.	55,540	53,436	52,940	50,658	46,158	50,816	59,736	-8.9	-22.7	518,557	545,747	+5.2
Cold-storage holdings, end of month, thous. of lbs.	186,070	214,479	204,939	177,888	126,810	167,018	118,174	-28.7	+7.3			
Prices:												
Hogs, heavy, Chicago, dolls. per 100 lbs.	9.61	10.12	10.86	11.71	12.43	9.19	10.85	+6.1	+14.6			
Hams, smoked, Chicago, dolls. per lb.	.206	.215	.236	.249	.254	.235	.224	+2.0	+13.4			
Lard, prime contract, N. Y., dolls. per lb.	.123	.122	.125	.128	.132	.128	.133	+3.1	-0.7			
Sheep and Lambs												
Sheep movement, primary market:												
Receipts, thousands.	1,952	1,913	1,898	2,362	3,386	2,209	2,848	+43.4	+19.0	16,847	17,996	+6.8
Shipments, total, thousands.	994	904	828	1,250	2,161	1,054	1,734	+72.9	+24.6	8,358	9,054	+8.3
Shipments, stocker and feeder, thousands.	205	278	234	564	1,080	390	947	+91.5	+14.1	2,670	2,807	+5.1
Local slaughter, thousands.	951	1,020	1,068	1,097	1,213	1,137	1,101	+10.6	+10.2	8,465	9,167	+7.1
Lamb and mutton:												
Production, inspected, thous. of lbs.	38,455	40,693	39,394	44,525	49,237	44,865	45,378	+10.6	+8.5	368,504	381,820	+3.6
Apparent consumption, thous. of lbs.	40,135	39,923	39,448	44,443	49,021	44,811	45,098	+10.3	+8.7	371,552	385,544	+3.8
Cold-storage holdings, end of month, thous. of lbs.	1,226	1,947	1,822	1,691	2,135	1,302	1,991	+26.3	+7.3			
Prices:												
Sheep, ewes, Chicago, dolls. per 100 lbs.	7.31	5.88	5.38	5.72	5.50	5.58	5.19	-3.8	+6.0			
Sheep, lambs, Chicago, dolls. per 100 lbs.	15.19	13.03	15.18	14.31	14.16	13.58	13.56	-1.0	+4.4			
Miscellaneous Meats												
Cold-storage holdings, end of month, thous. of lbs.	64,438	63,941	63,610	56,888	49,792	65,873	58,163	-12.5	-14.4			
Total Meats												
Production, inspected, thous. of lbs.	1,134,010	1,151,221	952,959	909,277	902,414	1,091,069	958,290	-0.8	-5.8	10,150,267	10,146,003	-0.1
Cold-storage holdings, end of month, thous. of lbs.	1,208,773	1,227,965	1,121,998	949,547	781,163	1,034,057	822,973	-17.7	-5.1			
Apparent consumption, thous. of lbs.	1,092,156	1,050,347	981,318	1,002,140	1,074,207	1,110,411	1,076,686	+7.2	-0.2	9,275,754	9,369,953	+1.0
Poultry												
Receipts at 5 markets, thous. of lbs.	17,862	18,849	22,238	22,361	23,859	22,691	24,391	+6.7	-2.2	183,386	189,514	+3.3
Cold-storage holdings, end of month, thous. of lbs.	43,872	38,230	40,395	40,749	43,868	39,711	43,201	+7.7	+1.5			
Fish												
Total catch, prin. ports, thous. of bbs.	27,650	29,809	27,324	30,130	24,284	33,294	26,633	-19.4	-8.8	226,137	225,060	-0.5
Cold-storage holdings, 15th of mo., thous. of lbs.	26,358	40,946	53,140	66,170	71,275	54,061	60,330	+7.7	+18.1			
Canned salmon:												
Shipments, United States, cases.	154,768	240,311	454,600	832,632	1,138,147	802,320	1,138,147	+39.5	+73.9	6,302,615	6,263,493	-23.4
Exports, Canada, cases.	42,117	23,106	26,333	121,152	168,962	110,004	97,163	+39.5	+73.9	708,517	770,734	+8.9

* See table on p. 18 of the September, 1928, issue for earlier data.

2 As of Oct. 1, 1928.

3 Final estimate for 1927.

5 Revised.

6 Cumulative through Aug. 31.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	May	June	July	August	Septem-ber	August	Septem-ber	Sep-tember, 1928, from August, 1928	Sep-tember, 1928, from Sep-tember, 1927	1927	1928	
TRANSPORTATION—Continued												
Railway Equipment												
Locomotives (Am. Ry. Assn.):												
Owned, end of month—												
Quantity..... number.....	60,284	60,094	59,975	59,769	59,602	61,540	61,455	-0.3	-3.0			
Tractive power..... mills. of lbs.	2,595	2,591	2,590	2,585	2,582	2,603	2,605	-0.1	-0.9			
In bad order, end of month—												
Quantity..... number.....	8,421	8,006	8,310	7,954	7,815	8,502	8,345	-1.7	-6.4			
Per cent of total in use..... per cent.	14.1	13.4	14.0	13.4	13.2	13.9	13.6	-1.5	-2.9			
Installed..... number.....	139	95	116	114	93	104	177	-18.4	-47.5	1,476	1,088	-26.3
Retired..... number.....	228	284	235	320	260	329	262	-18.7	-0.8	2,483	2,269	-8.6
New orders..... number.....	52	7	32	70	8	20	6	-99.6	+33.3	482	249	-48.3
Shipments, manufacturers' (Census)—												
Total..... number.....	41	51	46	34	41	81	127	+20.6	-67.7	838	435	-48.1
Steam, domestic..... number.....	29	39	19	23	28	71	86	+21.7	-67.4	573	285	-50.3
Electric, domestic..... number.....	10	11	5	4	2	6	7	-50.0	-71.4	116	87	-25.0
Unfilled orders (railroads), end of mo.—												
From manufacturers..... number.....	83	90	56	81	98	171	102	+21.0	-3.9			
In railroad shops..... number.....	30	30	17	19	15	36	32	-21.1	-53.1			
Unfilled orders, manufacturers' (Census)—												
Total..... number.....	220	201	198	204	178	363	271	-12.3	-35.1			
Steam, domestic..... number.....	138	109	98	135	118	244	167	-12.6	-29.3			
Electric, domestic..... number.....	39	37	59	26	27	68	49	+3.8	-44.9			
Exports, steam..... number.....	5	15	32	20	33	11	8	+64.9	-58.8	179	166	-7.3
Freight cars (Am. Ry. Assn.):												
Owned, end of month—												
Quantity..... cars.....	2,300,241	2,300,669	2,300,034	2,299,157	2,296,460	2,328,328	2,326,616	-0.1	-1.7			
Capacity..... mills. of lbs.	210,240	210,386	210,437	210,483	210,357	211,935	211,970	-0.1	-0.8			
In bad order, end of month—												
Quantity..... cars.....	151,359	145,210	151,867	149,252	148,333	141,038	137,571	-0.6	+7.8			
Per cent of total in use..... per cent.	6.7	6.5	6.7	6.6	6.6	6.2	6.0	0.0	+10.0			
New orders..... cars.....	2,354	2,286	307	767	1,236	1,066	40	+61.1		44,505	24,636	-44.6
Shipments—												
Total..... cars.....	5,908	5,147	4,963	5,295	3,220	5,317	4,397	-39.2	-26.8	43,646	33,356	-23.6
Domestic..... cars.....	5,854	5,115	4,908	5,261	3,000	5,270	4,393	-43.0	-31.7	43,133	32,761	-24.0
Unfilled orders (railroads)—												
Total..... cars.....	17,847	12,446	13,531	8,177	6,619	18,066	14,437	-19.1	-54.2			
From manufacturers..... cars.....	14,168	9,316	10,371	5,673	3,878	13,545	10,799	-31.6	-64.1			
In railroad shops..... cars.....	3,679	3,130	3,160	2,504	2,741	4,541	3,638	+9.5	-24.7			
Passenger cars:												
New orders..... cars.....	153	57	19	589	2	36	19			1,015	1,704	+67.9
Shipments—												
Total..... cars.....	23	95	123	147	146	152	201	-0.7	-27.4	961	817	-15.0
Domestic..... cars.....	18	95	123	144	143	146	201	-0.7	-28.9	921	747	-18.9
Passenger Travel												
National parks:												
Visitors..... number.....	125,102	271,621	553,394	499,633	222,698	492,016	199,336	55.4	+11.7	1,864,591	1,910,400	+2.5
Automobiles entered..... number.....	23,341	60,324	111,642	98,623	44,873	98,449	29,089	-54.5	+54.3	352,403	367,660	+4.3
Arrivals from abroad:												
Immigrants..... number.....	26,158	20,419	20,682	24,629	28,418	28,418	31,000			211,058	187,901	-11.0
United States citizens..... number.....	28,407	27,201	32,974	63,191		57,701	75,557			243,427	270,426	+11.1
Departures abroad:												
Emigrants..... number.....	6,240	7,205	7,804	6,488		6,322	7,625			41,139	47,214	+14.8
United States citizens..... number.....	34,993	53,028	68,463	50,323		43,039	39,748			294,024	327,671	+11.4
Passports issued..... number.....	37,648	29,674	15,776	9,866	8,056	10,269	8,474	-18.3	-4.9	157,384	163,319	+3.8
Pullman company operations:												
Revenue..... thous. of dolls.	6,313	7,432	7,279	7,593		7,528	7,625			54,508	54,619	+0.2
Passengers carried..... thousands.....	2,614	3,095	3,073	3,312		3,428	3,288			23,622	22,881	-3.1
Hotel room occupancy..... per ct. of capacity.....	69	64	60	65	68	66	68	+7.9	0.0			
Warehouses												
Public merchandise warehouses, space occupied..... per ct. of total.....	68.6	67.2	67.1	67.9								
PUBLIC UTILITIES												
Telephone companies:												
Operating revenue..... thous. of dolls.	69,277	68,783	67,676	68,784		65,756	66,529			518,665	540,570	+4.2
Operating income..... thous. of dolls.	17,448	16,941	15,019	15,985		14,972	16,322			127,094	132,545	+4.3
Telegraph companies:												
Commercial telegraph tolls..... thous. of dolls.	11,333	11,169	10,618	11,530		11,241	11,172			84,095	85,864	+2.1
Operating revenue..... thous. of dolls.	14,162	14,036	13,375	14,323		13,894	13,822			104,358	107,347	+2.9
Operating income..... thous. of dolls.	2,258	1,906	1,428	1,887		2,000	2,085			14,136	13,658	-3.4
Gas and electric companies:												
Gross earnings..... thous. of dolls.	180,255	178,835	173,000	174,000		162,647	169,414			1,388,863	1,458,818	+5.0
Net earnings..... thous. of dolls.	67,733	67,633	61,000	60,000		53,551	61,897			498,869	551,458	+10.5
Electric railways (212 companies):												
Passengers carried..... thous. of persons.....	797,279	760,509	728,849	736,223	717,810	745,769	728,371	-2.5	-1.4	7,001,229	6,917,365	-1.2
Average fare..... cents.....	8.057	8.081	8.089	8.121	8.121	7.952	7.952	0.0	+2.1			
Electric power production:												
Total..... mills. of kw. hours.....	7,130	7,010	7,140	7,485		6,693	6,605			52,581	56,998	+8.4
By water power..... mills. of kw. hours.....	3,187	3,104	3,075	3,042		2,411	2,201			20,044	23,541	+17.4
By fuels..... mills. of kw. hours.....	3,943	3,906	4,065	4,443		4,282	4,404			32,537	33,461	+2.8
In street railways, manf. plants, etc..... mills. of kw. hours.....	408	372	382	382		460	439			3,632	3,516	-3.2
In central stations..... mills. of kw. hours.....	6,722	6,638	6,759	7,103		6,233	6,166			48,949	53,484	+9.3
Electric power production (Canada):												
Total..... mills. of kw. hours.....	1,278	1,241	1,246	1,305		1,232	1,200			9,021	10,284	+14.0
By water power..... mills. of kw. hours.....	1,262	1,226	1,231	1,289		1,217	1,184			8,900	10,150	+14.0
Exported..... mills. of kw. hours.....	135	127	130	145		157	154			1,076	1,042	-3.2
Electric power, gross revenue..... thous. of dolls.	150,300	149,500	146,400	147,400		135,600	144,400			1,148,300	9,742,800	+748.1

Revised.

Cumulative through Aug. 11

TREND OF BUSINESS MOVEMENTS—Continued

The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. increase (+) or decrease (-) cumulative 1928 from 1927
	May	June	July	August	September	August	September	September, 1928, from August, 1928	September, 1928, from September, 1927	1927	1928	
	EMPLOYMENT AND WAGES											
Employment in factories:												
Massachusetts.....rel. to 1919-23..	75.4	73.6	72.9	74.2	75.6	85.9	87.1	+1.9	-13.2			
New York State.....rel. to 1923..	82.0	82.2	81.5	82.5	84.3	85.7	87.5	+2.2	-3.7			
New Jersey.....rel. to 1923..	9.0	9.0	9.0	9.1	9.4	9.3	9.5	+3.3	-1.1			
Pennsylvania.....rel. to 1923..	8.0	8.0	7.9	8.1	8.1	8.4	8.4	0.0	-3.6			
Delaware.....rel. to 1923..	7.5	7.4	7.5	7.4	7.7	7.1	7.4	+4.1	+4.1			
Maryland.....rel. to 1924..	87.8	86.5	85.6	88.1	89.0	92.4	94.0	+1.0	-5.3			
Iowa.....rel. to 1923..	121.5	124.1	123.3	124.0		118.7	118.8					
Illinois.....rel. to 1923..	83.2	85.1	83.4	85.6	86.8	85.5	85.3	+1.4	+1.8			
Wisconsin.....rel. to 1923..	91.8	92.9	96.8	97.9	97.1	98.7	95.9	-0.8	+1.3			
Detroit.....rel. to 1923..	119.0	120.6	125.7	134.7	135.4	94.4	90.3	+0.5	+49.9			
Cleveland.....number	76,556	76,580	76,679	78,420	78,910	74,500	72,247	+0.6	+9.2			
Detroit.....number	259,073	262,651	273,796	293,457	294,829	205,525	196,580	+0.5	+50.0			
Milwaukee.....number	36,777	36,922	37,314	37,385		35,361	35,544					
New York State.....number	453,683	454,952	451,125	456,303	466,357	474,424	484,115	+2.2	-3.7			
Oklahoma.....number	26,553	27,888	29,405	31,137	30,812	30,718	29,948	-1.0	+2.9			
Ohio*.....rel. to 1923..	104.2	104.7	103.7	106.3	108.3	102.6	101.9	+1.9	+6.3			
Total pay roll:												
New York State (weekly).....thous. of dolls.	13,241	13,413	13,149	13,411	13,862	13,898	14,317	+3.4	-3.2			
Oklahoma (weekly).....thous. of dolls.	702	743	793	877	865	819	970	-1.4	-10.8			
Wisconsin.....rel. to 1923..	99.9	104.8	98.7	108.7	106.5	106.9	101.7	-2.0	+4.7			
New York State.....rel. to 1923..	87.8	89.0	87.2	89.0	92.0	92.2	95.0	+3.4	-3.2			
New Jersey.....rel. to 1923..	98	98	96	99	102	101	102	+3.0	0.0			
Pennsylvania.....rel. to 1923..	83	83	76	83	83	85	83	0.0	0.0			
Delaware.....rel. to 1923..	79	78	74	76	77	75	76	+1.3	+1.3			
Employment, Canada.....rel. to Jan. 1920..	112.4	116.3	119.9	119.5		109.7	109.0					
Ohio construction*.....rel. to 1923..	116	116	131		135	140	136	-2.9	-0.7			
Employment, trade-unions:												
United States.....per cent of total..	87.0	89.0	88.0	91.0	90.0			-1.1				
Canada.....per cent of total..	96.3	96.8	97.5	97.6		96.3	96.9					
Anthracite mines:												
Employment.....rel. to 1923-25..	115.9	113.8	105.1	107.9	110.8	117.1	118.7	+2.7	-6.7			
Pay roll.....rel. to 1923-25..	122.1	92.8	62.0	86.7	92.5	90.5	112.0	+6.7	-17.4			
Federal civilian employees, Washington, D. C., end of month.....number												
	61,422	61,388	61,650	62,111		60,413	60,267					
Average weekly earnings, factories:												
Illinois.....dolls.	28.82	29.28	27.45	29.13		28.61	27.65					
New York State.....dolls.	29.19	29.48	29.15	29.39	29.72	29.29	29.57	+1.1	+0.5			
Wisconsin.....dolls.	24.07	27.03	24.45	26.60	26.30	25.94	25.40	-1.1	+3.5			
Oklahoma.....dolls.	26.44	26.24	26.97	28.15	28.08	26.66	32.73	-0.2	-14.2			
Massachusetts.....rel. to 1914..	232.9	234.1	234.6	234.4	230.9	236.4	237.1	-1.5	-2.6			
New York.....rel. to 1914..	233.9	236.2	233.6	235.5	238.1	234.7	236.9	+1.1	+0.5			
New Jersey.....rel. to 1923..	110	110	108	109	110	109	109	+0.9	+0.9			
Pennsylvania.....rel. to 1923..	103	102	95	102	101	101	98	-1.0	+3.1			
Delaware.....rel. to 1923..	104	103	98	102	101	102	101	-1.0	-1.0			
Illinois.....rel. to 1923..	106.5	108.2	101.4	107.6		105.7	102.1					
Wisconsin.....rel. to 1923..	108.8	112.8	102.0	111.0	109.7	108.2	105.9	-1.2	+3.6			
Average weekly earnings (National Industrial Conference Board):												
Grand total (both sexes).....dollars	27.23	27.30	27.09	27.35		27.16	27.32					
Total male.....dollars	30.07	30.35	29.95	30.30		29.76	29.70					
Skilled male.....dollars	31.44	31.74	31.35	31.77		31.33	31.18					
Unskilled male.....dollars	24.98	25.17	24.69	24.78		24.08	24.29					
Total women.....dollars	16.87	17.01	17.07	17.04		17.26	17.32					
Average weekly hours:												
Nominal (both sexes).....hours	49.4	49.7	49.6	49.6		49.5	49.5					
Actual (both sexes).....hours	47.8	47.7	47.5	47.9		47.8	47.8					
Wages, road labor, by districts:												
New England.....cents per hour	49	48	47	48	48	49	49	0.0	-2.0			
Middle Atlantic.....cents per hour	42	42	43	41	42	47	46	+2.4	-8.7			
South Atlantic.....cents per hour	28	26	27	34	24	27	26	-29.4	-7.7			
East South Central.....cents per hour	27	26	25	25	25	26	25	0.0	0.0			
West South Central.....cents per hour	29	30	27	29	28	28	33	-10.3	-21.2			
East North Central.....cents per hour	38	37	38	39	38	38	40	-2.6	-5.0			
West North Central.....cents per hour	37	36	36	38	39	37	38	+2.6	+2.6			
Mountain.....cents per hour	49	45	44	50	52	46	46	+4.0	+13.0			
Pacific.....cents per hour	51	53	53	42	54	54	54	+1.9	-1.9			
United States, average.....cents per hour	40	40	40	42	43	39	40	+2.4	+7.5			
Wages, U. S. Steel Corp.....cents per hour	50	50	50	50	50	50	50	0.0	0.0			
Wages, steel sheet workers.....per cent of base	125.5	125.5	125.5	125.5	125.5	125.5	125.5	0.0	0.0			
Applicants per 100 jobs, employment agencies:												
United States.....number	128	121	137	129		129	121					
Eastern States.....number	138	147	151	223		137	131					
Central States.....number	135	161	150	132		156	136					
Southern States.....number	204	221	174	121		114	114					
Western States.....number	66	66	80	69		79	79					
Canada.....number	114	118	113	106		109	98					
Factory Labor Turnover												
(Percentage of number on pay roll)												
Departures:												
Total.....per cent (annual basis)	42.1	39.5	38.0	42.3	49.2	36.4	46.2	+16.3	+6.5			
Voluntary quits.....per cent (annual basis)	28.7	27.1	27.2	31.9	40.3	23.0	33.6	+26.3	+19.9			
Lay offs.....per cent (annual basis)	8.4	7.5	5.9	5.1	3.9	8.5	6.4	-23.5	-39.1			
Discharges.....per cent (annual basis)	5.0	4.9	4.9	5.3	5.0	4.9	6.0	-5.7	-16.7			
Accessions.....per cent (annual basis)	47.2	41.3	46.9	55.7	55.7	39.6	43.6	0.0	+27.8			
Industrial disputes:												
Disputes.....number	74	64	64	67		53	58					
Workers involved.....number	136,094	134,406	135,681	134,050		198,444	196,829					
Man-days lost in month.....number	3,526,608	3,580,719	3,403,778	3,675,508		4,999,751	4,945,702					

* Revised.

* See table on p. 48 of the October, 1928, issue for earlier data.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. In-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	May	June	July	August	Septem-ber	August	Septem-ber	Sep-tember, 1923, from August, 1923	Sep-tember, 1923, from Sep-tember, 1927	1927	1928	
Stocks and Bonds—Continued												
<i>The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"</i>												
Stock, prices, average weekly closing—Contd.												
Copper and brass (10).....rel. to 1926	151.5	147.5	150.0	155.2	172.0	110.0	115.9	+10.8	+48.4			
Food, other than meat (23).....rel. to 1926	158.4	152.4	152.1	158.1	167.1	124.3	130.6	+5.7	+27.9			
Machinery and machine equipment (10).....rel. to 1926	138.0	132.3	132.7	135.4	139.4	111.1	114.9	+3.0	+21.3			
Oil producing and refining (16).....rel. to 1926	118.7	112.0	110.9	112.6	115.7	99.3	99.3	+2.8	+16.5			
Railroad equipment (9).....rel. to 1926	135.2	127.1	125.1	123.0	129.5	131.9	133.5	+4.8	-3.0			
Steel and iron (10).....rel. to 1926	145.6	137.7	136.6	143.6	155.8	132.7	143.6	+8.5	+8.5			
Textiles (23).....rel. to 1926	120.0	110.4	106.4	105.9	109.6	102.4	109.1	+3.5	+0.5			
Theaters, motion pictures, and amusements (7).....rel. to 1926	115.6	111.5	111.0	116.6	135.1	99.4	103.7	+15.9	+30.3			
Automobile tires, rubber goods, etc. (7).....rel. to 1926	128.8	115.8	113.3	119.3	127.6	114.5	128.1	+7.0	-0.4			
Tobacco and tobacco products (10).....rel. to 1926	140.0	134.9	134.3	137.6	142.5	142.0	149.4	+3.6	-4.6			
Traction, motor transporta-tion, etc. (9).....rel. to 1926	105.9	97.3	96.0	95.7	99.5	94.3	93.8	+4.0	+6.1			
Stock yields:												
Common.....per cent.	4.36	4.53	4.56	4.44	4.20	5.12	4.90	-5.4	-14.3			
Preferred, high grade.....per cent.	5.21	5.32	5.40	5.43	5.41	5.48	5.45	-0.4	-0.7			
Stock sales, N. Y. Stock Exch. thous. of shares	82,164	63,741	39,001	67,704	90,907	51,057	51,918	+34.3	+75.1	420,309	613,202	+45.9
Bond sales:												
Miscellaneous.....thous. of dolls.	263,388	246,885	183,815	173,561	190,582	290,948	234,987	+9.8	-25.3	2,602,892	2,155,943	-17.2
Liberty-Treasury.....thous. of dolls.	14,764	14,517	25,240	9,988	10,467	13,070	24,326	+4.8	-57.0	232,593	138,850	-41.3
Total.....thous. of dolls.	278,152	261,402	209,055	183,549	201,049	304,018	279,313	+9.5	-28.0	2,835,485	2,294,793	-19.1
Bond prices:												
Highest-grade rails p. ct. of par. 4% bond	94.49	92.04	90.62	89.66	91.05	94.58	95.19	+1.6	-4.3			
Second-grade rails p. ct. of par. 4% bond	86.92	84.42	83.09	80.99	82.51	85.43	86.11	+1.9	-4.2			
Public utility p. ct. of par. 4% bond	81.42	79.51	79.47	79.08	79.51	78.23	78.29	+0.5	+1.6			
Industrial p. ct. of par. 4% bond	80.73	79.39	77.74	77.97	78.18	79.55	79.81	+0.3	-2.6			
Comb. price index p. ct. of par. 4% bond	85.54	83.54	82.45	81.68	82.53	83.98	84.35	+1.0	-2.2			
Bond prices, 1st of following month:												
5 Liberty bonds p. ct. of par.	105.03	105.16	103.20	103.88	103.11	104.14	103.68	-0.7	-0.5			
16 foreign govt. and city p. ct. of par.	105.28	104.84	104.85	104.77	104.55	105.67	105.64	-0.2	-1.0			
Comb. price index, 66 bonds p. ct. of par.	101.71	101.14	100.05	100.36	100.40	101.34	101.51	0.0	-1.1			
Bond yields:												
Total, 60 high grade.....per cent.	4.42	4.50	4.54	4.59	4.57	4.48	4.45	-0.4	+2.7			
Railroads (15).....per cent.	4.27	4.35	4.44	4.49	4.43	4.32	4.27	-1.3	+3.7			
Industries (15).....per cent.	4.81	4.91	4.95	4.96	4.95	4.81	4.80	-0.2	+3.1			
Utilities (15).....per cent.	4.57	4.66	4.68	4.73	4.73	4.78	4.75	0.0	-0.4			
Municipal (15).....per cent.	4.02	4.09	4.13	4.16	4.17	4.00	3.96	+0.2	+5.3			
Municipal (20).....per cent.	4.01	4.06	4.13	4.18	4.16	4.02	3.96	-0.5	+5.1			
U. S. Treasury notes and certificates, 3-6 months.....per cent.	3.90	3.97	4.26	4.43	4.57	2.70	2.81	+3.2	+62.6			
Liberty and Treasury bonds.....per cent.	3.35	3.40	3.50	3.56	3.54	3.45	3.44	-0.6	+2.9			
Long-term real-estate bonds issued:												
Grand total.....thous. of dolls.	77,450	66,364	48,495	21,947	52,116	32,247	42,763	+137.5	+21.9	432,197	518,089	+19.9
Purpose of issue:												
Finance construction.....thous. of dolls.	44,515	27,400	18,581	9,970	4,460	19,435	23,463	-55.3	-81.0	197,649	194,510	-1.6
Real-estate mortgage.....thous. of dolls.	20,910	6,763	24,079	5,590	32,955	4,482	5,140	+489.4	+541.1	110,244	178,329	+61.8
Acquisitions and improvements.....thous. of dolls.	2,600	2,610	1,510	3,252	530	2,080	3,310	-83.7	-84.0	56,353	49,728	-11.8
Kind of structure:												
Office and commercial.....thous. of dolls.	45,175	22,430	9,786	4,785	2,510	7,700	19,575	-47.5	-87.2	139,313	162,671	+16.8
Hotels.....thous. of dolls.	10,300	885	4,020	2,200	400	7,170	5,140	-81.8	-92.2	37,971	34,560	-9.0
Apartments.....thous. of dolls.	4,265	4,085	4,600	3,145	270	4,700	3,473	-91.4	-92.2	40,725	30,279	-25.7
Corporation Stockholders												
<i>(Quarterly)</i>												
Pennsylvania Railroad Co.:												
Domestic.....number		7 153,294				7 154,415		+0.7	+8.8			
Foreign.....number		7 3,016				7 3,032		+0.5	+5.5			
U. S. Steel Corp. common stock:												
Domestic.....number		7 96,649				7 102,457		+6.0	+7.5			
Foreign.....number		7 1,688				7 1,748		+3.6	+5.7			
Shares held by brokers.....per ct. of total		7 22.79				7 23.95		+5.1	-6.8			
American Telephone & Telegraph Co.:												
Domestic.....number		7 427,195				7 451,603		+5.7	+8.4			
Foreign.....number		7 5,172				7 5,426		+4.9	+2.6			
FOREIGN EXCHANGE RATES												
Europe:												
England.....dolls. per £sterling	4.88	4.88	4.86	4.85	4.85	4.86	4.86	0.0	-0.2			
France.....dolls. per franc	.039	.039	.039	.039	.039	.039	.039	0.0	0.0			
Italy.....dolls. per lira	.053	.053	.052	.052	.052	.054	.054	0.0	-3.7			
Belgium.....dolls. per franc	.140	.140	.139	.139	.139	.139	.139	0.0	0.0			
Netherlands.....dolls. per guilder	.404	.403	.403	.401	.401	.401	.401	0.0	0.0			
Sweden.....dolls. per krone	.268	.268	.268	.268	.268	.268	.268	0.0	-0.4			
Switzerland.....dolls. per franc	.193	.193	.193	.193	.193	.193	.193	0.0	0.0			
Asia:												
Japan.....dolls. per yen	.466	.466	.459	.451	.458	.473	.468	+1.6	-2.1			
India.....dolls. per rupee	.366	.365	.363	.363	.363	.361	.363	0.0	0.0			
America:												
Canada.....dolls. per Canadian doll.	.999	.998	.998	1.000	1.000	.999	1.001	0.0	-0.1			
Argentina.....dolls. per gold peso	.972	.969	.961	.959	.957	.968	.971	-0.2	-1.4			
Brazil.....dolls. per milreis	.120	.120	.119	.119	.119	.118	.119	0.0	0.0			
Chile.....dolls. per paper peso	.122	.122	.121	.121	.121	.120	.121	0.0	0.0			

3 Revised.

7 Quarter ending in month indicated.

TREND OF BUSINESS MOVEMENTS—Continued

	1928					1927		PER CENT INCREASE (+) OR DECREASE (-)		CUMULATIVE TOTAL FROM JAN. 1 THROUGH SEPT. 30		Per ct. in-crease (+) or de-crease (-) cumu-lative 1928 from 1927
	May	June	July	August	Septem-ber	August	Septem-ber	Sep-tember, 1928, from August, 1928	Sep-tember, 1928, from Sep-tember, 1927	1927	1928	
<i>The cumulatives shown are through September, except where otherwise noted. Earlier data for items shown here may be found on pages 28 to 137 of the August, 1928, "Survey"</i>												
U. S. FOREIGN TRADE												
Imports												
Grand total.....thous. of dolls..	353,981	\$ 317,249	317,804	\$ 346,813	319,227	368,820	342,154	- 8.0	- 6.7	3,153,447	3,069,803	-2.7
By grand divisions:												
Europe—												
Total.....thous. of dolls..	104,335	95,565	97,688	107,863	-----	110,169	113,446	-----	-----	6 933,329	6 807,519	-13.5
France.....thous. of dolls..	11,157	11,927	11,293	15,138	-----	14,729	15,923	-----	-----	6 120,826	6 98,585	-18.4
Germany.....thous. of dolls..	16,136	15,788	20,662	21,025	-----	17,837	20,162	-----	-----	6 145,797	6 143,953	-1.3
Italy.....thous. of dolls..	8,588	8,169	6,949	6,875	-----	8,578	8,585	-----	-----	6 78,084	6 63,663	-18.5
United Kingdom.....thous. of dolls..	35,047	27,854	28,113	27,517	-----	33,038	29,721	-----	-----	6 261,905	6 231,467	-11.6
North America—												
Total.....thous. of dolls..	85,915	73,901	77,735	78,720	-----	82,865	77,784	-----	-----	6 742,643	6 645,721	-13.1
Canada.....thous. of dolls..	42,993	41,015	41,784	43,240	-----	39,973	41,902	-----	-----	6 344,740	6 316,891	-8.1
South America—												
Total.....thous. of dolls..	47,376	51,099	45,644	50,552	-----	46,401	38,293	-----	-----	6 382,533	6 398,301	+4.1
Argentina.....thous. of dolls..	10,713	10,319	8,119	8,438	-----	9,694	10,017	-----	-----	6 73,994	6 73,573	-0.6
Asia and Oceania—												
Total.....thous. of dolls..	109,724	87,252	89,769	100,888	-----	123,707	105,979	-----	-----	6 1,023,159	6 834,291	-18.5
Japan.....thous. of dolls..	38,536	22,306	24,890	38,991	-----	47,482	35,369	-----	-----	6 308,265	6 250,570	-18.7
Africa, total.....thous. of dolls..	6,617	9,472	6,968	8,782	-----	5,677	6,651	-----	-----	6 71,781	6 64,642	-9.9
By classes and commodities:												
Crude materials.....thous. of dolls..	137,799	\$ 109,666	\$ 106,027	\$ 122,145	110,240	144,232	130,660	- 9.7	-15.6	1,241,527	1,122,723	-9.6
Foodstuffs, crude, and food animals.....thous. of dolls..	\$ 47,968	\$ 48,325	43,174	45,939	36,870	42,656	33,190	-19.7	+11.1	259,727	417,623	+60.8
Manufactured foodstuffs.....thous. of dolls..	\$ 34,234	30,005	33,314	30,060	33,791	35,471	33,016	+12.4	+2.3	344,898	310,564	-10.0
Semimanufactures.....thous. of dolls..	59,084	\$ 57,655	\$ 60,032	\$ 66,500	63,366	66,691	63,094	- 4.7	+0.4	562,662	557,856	-0.9
Finished manufactures.....thous. of dolls..	74,896	\$ 71,597	\$ 75,258	82,168	74,959	79,770	82,194	- 8.8	- 8.8	644,633	661,037	+2.5
Exports												
Grand total, including reexports.....thous. of dolls..	421,888	388,563	378,768	\$ 379,874	426,000	374,751	\$ 425,267	+12.1	+0.2	3,508,123	3,561,859	+1.5
By grand division:												
Europe—												
Total.....thous. of dolls..	188,160	161,481	152,342	149,183	-----	168,282	211,728	-----	-----	6 1,611,028	6 1,399,098	-13.2
France.....thous. of dolls..	18,525	15,712	15,918	15,167	-----	14,403	21,084	-----	-----	6 148,038	6 134,190	-9.4
Germany.....thous. of dolls..	32,078	28,365	22,094	24,579	-----	30,239	\$ 51,855	-----	-----	6 316,538	6 251,681	-20.5
Italy.....thous. of dolls..	15,149	11,254	11,853	9,955	-----	9,332	8,169	-----	-----	6 86,324	6 98,720	+14.4
United Kingdom.....thous. of dolls..	61,161	52,230	52,120	52,826	-----	57,670	72,463	-----	-----	6 598,405	6 489,111	-18.3
North America—												
Total.....thous. of dolls..	123,489	114,005	110,590	118,940	-----	109,058	\$ 118,505	-----	-----	6 941,333	6 858,042	-8.8
Canada.....thous. of dolls..	88,978	81,888	77,325	85,851	-----	75,241	85,725	-----	-----	6 629,134	6 592,513	-5.8
South America—												
Total.....thous. of dolls..	38,242	39,005	43,907	43,766	-----	38,391	\$ 33,884	-----	-----	6 328,341	6 305,240	-7.0
Argentina.....thous. of dolls..	14,082	15,692	16,736	17,348	-----	15,678	\$ 12,976	-----	-----	6 119,440	6 114,258	-4.3
Asia and Oceania—												
Total.....thous. of dolls..	63,014	63,520	61,979	59,973	-----	50,492	52,903	-----	-----	6 549,685	6 500,556	-8.9
Japan.....thous. of dolls..	22,998	21,628	17,987	15,517	-----	12,199	17,923	-----	-----	6 172,839	6 156,417	-9.5
Africa, total.....thous. of dolls..	8,983	10,552	9,950	8,011	-----	8,527	8,247	-----	-----	6 77,731	6 72,923	-6.2
Total domestic exports only.....thous. of dolls..	\$ 413,829	\$ 380,301	\$ 371,472	\$ 371,442	414,967	367,575	416,472	+11.7	-0.4	3,427,253	3,482,556	+1.6
By classes of commodities:												
Crude materials.....thous. of dolls..	89,811	\$ 74,918	60,177	52,389	120,187	55,135	102,145	+129.4	+17.7	769,039	770,840	+0.2
Foodstuffs, crude, and food animals.....thous. of dolls..	19,738	17,158	14,212	29,308	42,363	46,770	69,429	+44.5	-39.0	288,656	182,187	-36.9
Manufactured foodstuffs.....thous. of dolls..	33,123	31,222	30,666	\$ 34,882	35,897	34,160	38,562	+2.9	-6.9	333,206	324,236	-2.7
Semimanufactures.....thous. of dolls..	\$ 67,150	\$ 63,062	61,397	56,093	50,994	59,786	54,791	- 9.1	-6.9	529,084	537,615	+1.6
Finished manufactures.....thous. of dolls..	204,007	\$ 193,941	\$ 205,020	\$ 198,770	165,527	171,724	151,545	-16.7	+9.2	1,507,269	1,667,679	+10.6
Agricultural exports (quantities):												
All commodities.....rel. to 1910-14..	92	76	64	75	138	94	142	+84.0	-2.8	-----	-----	-----
All commodities except cotton.....rel. to 1910-14..	103	91	84	126	168	155	211	+33.3	-20.4	-----	-----	-----
CANADIAN FOREIGN TRADE												
Total trade:												
Imports.....thous. of dolls..	113,582	110,694	103,404	114,175	106,066	99,348	91,803	- 7.1	+15.5	816,353	912,267	+11.7
Exports.....thous. of dolls..	120,154	109,139	127,369	113,904	111,856	95,955	99,335	- 1.8	+12.6	845,267	926,839	+9.7

* Revised.

* Cumulative through Aug. 31.

PUBLICATIONS OF THE DEPARTMENT OF COMMERCE

Recent publications of the Department of Commerce having the most direct interest to readers of the SURVEY OF CURRENT BUSINESS are listed below. A complete list may be obtained by addressing the Division of Publications, Department of Commerce, Washington, D. C. The publications may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices stated. If no price is mentioned, the publication is distributed free.

OFFICE OF THE SECRETARY

Airports and Aeronautics.—Aeronautics Bulletin No. 5 (formerly No. 5) (No. 5) 10 pages. Sept. 1, 1928. Lists proposed aviation fields arranged alphabetically by States.

Radio Service.—August, 1928.—24 pages. Issued monthly by Bureau of Commerce Department. Contains lists of radio stations and references to current radio literature. Single copies, 5 cents; annual subscription, 25 cents.

American and Foreign Standards, Compiled and Promulgated by American Marine Standards Committee.

- Magnesium Oxide Coating and Blocks.—Standard E No. 15-1928; 11-12 pages. Price, 5¢.
- Requirements for the mixture of magnesium and aluminum.—Standard E No. 16-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 17-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 18-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 19-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 20-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 21-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 22-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 23-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 24-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 25-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 26-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 27-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 28-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 29-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 30-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 31-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 32-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 33-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 34-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 35-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 36-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 37-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 38-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 39-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 40-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 41-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 42-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 43-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 44-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 45-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 46-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 47-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 48-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 49-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 50-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 51-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 52-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 53-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 54-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 55-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 56-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 57-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 58-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 59-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 60-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 61-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 62-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 63-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 64-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 65-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 66-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 67-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 68-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 69-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 70-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 71-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 72-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 73-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 74-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 75-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 76-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 77-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 78-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 79-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 80-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 81-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 82-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 83-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 84-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 85-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 86-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 87-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 88-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 89-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 90-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 91-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 92-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 93-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 94-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 95-1928; 11-12 pages. Price, 5¢.
- Mercuric Oxide.—Standard E No. 96-1928; 11-12 pages. Price, 5¢.
- Mercuric Sulfide.—Standard E No. 97-1928; 11-12 pages. Price, 5¢.
- Mercuric Chloride.—Standard E No. 98-1928; 11-12 pages. Price, 5¢.
- Mercuric Iodide.—Standard E No. 99-1928; 11-12 pages. Price, 5¢.
- Mercuric Nitrate.—Standard E No. 100-1928; 11-12 pages. Price, 5¢.

OFFICE OF THE COMMISSIONER OF FISHERIES

For information concerning the publication and distribution of census publications, apply to the Director of the Census.

Census of Religious Bodies, 1926.—Denominational reports showing a history of each and organization with general statistics concerning membership, value, amount of church property, debt, etc. Price, 5¢.

- Church of England in India. Paper, 11 pages. Price, 5¢.
- Communist Party. Paper, 13 pages. Price, 5¢.
- Constitution of the United States. Paper, 20 pages. Price, 5¢.
- Mercuric Chloride. Paper, 2 pages. Price, 5¢.
- Schwartzkopf. Paper, 2 pages. Price, 5¢.

Manufacture of Automobile Term Equipment.—Eighth report of an annual series which covers the year 1927. Contains data concerning equipment and certain additional products listed under the term equipment. Paper, 13 pages. Price, 5¢.

Census of Agriculture, 1927. Summary Statistics by States.—This is a revised edition of the original summary published as a result of the census of agriculture, 1925, and gives general statistics for that year and for the years covered by the investigation. Paper, 14 pages. Price, 10¢.

BUREAU OF FOREIGN AND DOMESTIC COMMERCE

The publications of this bureau may be purchased from the bureau or its district offices.

Monthly Summary of Foreign Commerce of United States, August, 1928.—Part I contains statistics of exports of some merchandise, and imports by articles for August, 1927 and for eight months ended August, 1927 and 1928. Part II contains summaries of export and import trade, and average import and export prices; statistics of trade with Alaska, Hawaii, and Porto Rico. Single copies, 10¢; annual subscription, \$1.25.

Selling Agents in Germany. by Walter Hertz, trade commissioner. Trade Information Bulletin No. 574; ii+27 pages. Deals with suggestions to leather exporters relative to foreign trade, packing, invoice practice, use and registration of trademarks, establishment of agencies or branch offices in Germany, and information as to distribution methods, advertising, and credit terms, methods of advertising, and kinds of leather desired in the German market. Price, 10¢.

Developing Markets Abroad. ii+20 pages. Deals with the present and future factors in developing markets.

BUREAU OF STANDARDS

Bureau of Standards Journal of Research, August, 1928.—Pages 104-195. This journal contains the papers formerly published in Technologic and Scientific papers series, which series have been discontinued. The articles in this journal are published in the Research Papers Series and are issued separately in connection with the journal. Single copies 25¢; annual subscription, \$2.75.

Research Papers Series.—Reprints from Bureau of Standards Journal of Research, July, 1928.

- Accelerated Tests of Organic Protective Coatings,** by Percy H. Walker and E. F. Hickson. Research Paper No. 1, pp. 1-17, 4 page plates. Describes the equipment used in making tests of organic protective coatings to determine liability to deterioration. Price, 5¢.
- Measurement of Tread Movement of Pneumatic Tires and Discussion of Probable Relation to Tread Wear,** by W. L. Holt and C. M. Cook. Research Paper No. 2, pp. 19-23, 3 illus., 3 page plates. Price, 5¢.
- Interferometer Measurements of Wave Lengths in Vacuum Arc Spectra of Titanium and Other Elements,** by C. C. Kless. Research Paper No. 4, pp. 75-90, 1 illus. Report on measurements of standard solar wave lengths by interference methods. Price, 5¢.
- Analysis of Bauxite and Refractories of High Alumina Content,** by G. E. F. Lundell and J. I. Hoffmann. Research Paper No. 5, pp. 91-104. Study of details involved in analysis of bauxite and burnt refractories of high alumina content. Price, 5¢.

Technical News Bulletin, Sept., 1928. Pages 125-138. Monthly. Contains items describing the laboratory activities of the bureau and a list of pamphlets and magazine articles published. Annual subscription, 25¢.

BUREAU OF FISHERIES

Trade in Fresh and Frozen Fishery Products and Related Marketing Considerations in Atlanta, Ga., by R. H. Fiedler. Document No. 1039. (Appendix III to Report of U. S. Commissioner of Fisheries for 1928, pp. 43-60.) Report on receipts and sources of supply of fishery products in Atlanta, methods of transportation and distribution, cold-storage facilities, and retail trade in this market. Price, 5¢.

BUREAU OF MINES

Mineral Resources of United States, 1926.—The reports on mineral resources are first issued in the form of bulletins of which the following have been released since the October announcement and may be obtained at the price indicated:

- Copper in 1926. (Pt. I, pp. 559-615.) Price, 10¢.
- Gold, Silver, Copper, and Lead in South Dakota and Wyoming in 1926. (Pt. I, pp. 617-625.) Price, 5¢.
- Gold, Silver, Copper, Lead, and Zinc in Nevada in 1926. (Pt. I, pp. 511-558.) Price, 10¢.

Mineral Resources of United States, 1927.—The following have been released since the October announcement and may be obtained at the price indicated:

- Feldspar in 1927. (Pt. II, pp. 57-65.) Price, 5¢.
- Gold, Silver, Copper, Lead, and Zinc in Eastern States in 1927. (Pt. I, pp. 1-6.) Price, 5¢.
- Potash in 1927. (Pt. II, pp. 43-50.) Price, 5¢.
- Silica in 1927. (Pt. II, pp. 51-55.) Price, 5¢.

BUREAU OF NAVIGATION

American Documented Seagoing Merchant Vessels of 500 Gross Tons and Over, September, 1928.—ii+72 pages. Monthly. Single copies, 10¢; annual subscription, 75¢.

COAST AND GEODETIC SURVEY

Tide Tables, United States and Foreign Ports, for Year 1929.—Serial No. 415; 473 pages. Price, 75¢.

United States Coast and Geodetic Survey, its Work, Methods, and Organization.—Special Publication No. 23; vi+130 pages, 37 illus., 4 maps. This is a revised edition of this publication.

Radio Acoustic Position Finding.—Special Publication No. 146; iv+62 pages, 22 illus. Description of apparatus used and methods of application in making hydrographic surveys by radio. Price, 20¢.

Measurement of Salinity of Sea Water, by Jerry H. Service. Special Publication No. 147; iv+20 pages, 5 illus., 3 charts. Deals with the different methods used on board ship for measuring the salinity of sea water and describes the apparatus used. Price, 10¢.

STEAMBOAT INSPECTION SERVICE

Great Lakes: General Rules and Regulations Prescribed by Board of Supervising Inspectors as Amended at Board Meeting of January, 1923.—Form 801B; x+204 pages, 5. illus. Contains the regulations regarding equipment of vessels navigating the Great Lakes and gives rulings in connection with handling of so-called dangerous articles.

CHIEF FUNCTIONS OF THE DEPARTMENT OF COMMERCE

WILLIAM F. WHITING, Secretary of Commerce

WALTER F. BROWN, Assistant Secretary of Commerce. EPHRAIM F. MORGAN, Solicitor

AERONAUTICS BRANCH

WILLIAM P. McCracken, Jr., Assistant Secretary of Commerce for Aeronautics

Establishment of civil airways and maintenance of aids to air navigation; inspection and registration of aircraft and licensing of pilots; enforcement of air traffic rules; investigation of accidents; encouragement of municipal air ports; fostering of air commerce; scientific research in aeronautics; and dissemination of information relating to commercial aeronautics. (Some of these functions are performed by special divisions of the Lighthouse Service, the Bureau of Standards, and the Coast and Geodetic Survey.)

BUREAU OF THE CENSUS

WILLIAM M. STEUART, Director

Taking censuses of population, inmates of institutions, mines and quarries, forest products, and water transportation every 10 years; censuses of agriculture and electrical public utilities every 5 years; and a census of manufactures every 2 years.

Compilation of statistics of wealth, public debt and taxation, including financial statistics of local governments, every 10 years; annual compilation of financial statistics of State and municipal governments.

Compilation of statistics of marriage, divorce, births, deaths, and penal institutions annually, and of death rates in cities and automobile accidents weekly.

Compilation quarterly or monthly of statistics on cotton, wool, tobacco, leather, and other industries; publication in the Survey of Current Business of monthly commercial and industrial statistics.

BUREAU OF FOREIGN AND DOMESTIC COMMERCE

JULIUS KLEIN, Director

The collection of timely information concerning world market conditions and openings for American products in foreign countries, through commercial attachés, trade commissioners, and consular officers, and its distribution through weekly Commerce Reports, bulletins, confidential circulars, the news and trade press, and district and cooperative offices in 65 cities.

The maintenance of commodity, technical, and regional divisions to afford special service to American exporters and manufacturers.

The compilation and distribution of lists of possible buyers and agents for American products in all parts of the world and publication of weekly lists of specific sales opportunities abroad.

The publication of statistics on imports and exports.

The study of the processes of domestic trade and commerce.

BUREAU OF STANDARDS

GEORGE K. BURGESS, Director

Custody, development, and construction of standards of measurement, quality, performance, or practice; comparison of standards used by scientific or other institutions; determination of physical constants and properties of materials; researches and tests on materials and processes; and publication of scientific and technical bulletins reporting results of researches and fundamental technical data.

Preparation of specifications for Government purchases, through the Federal Specifications Board.

Collection and dissemination of information concerning building codes and the planning and construction of houses.

Establishment of simplified commercial practices through cooperation with business organizations in order to reduce the wastes resulting from excessive variety in commodities.

BUREAU OF MINES

SCOTT TURNER, Director

Technical investigations in the mining, preparation and utilization of minerals, including the study of mine hazards and safety methods and of improved methods in the production and use of minerals.

Testing of Government fuels and management of the Government Fuel Yard at Washington.

Research on helium and operation of plants producing it. Studies in the economics and marketing of minerals and collection of statistics on mineral resources and mining accidents.

The dissemination of results of technical and economic researches in bulletins, technical papers, and resources series, miners' circulars, and miscellaneous publications.

BUREAU OF FISHERIES

HENRY O'MALLEY, Commissioner

The propagation and distribution of fish and shellfish, in order to prevent the depletion of the fisheries; investigations to promote conservation of fishery resources; development of commercial fisheries and agriculture; improvement of fishery methods, improvements in merchandising; collection of fishery statistics; administration of Alaska fisheries and fur seals; and the protection of sponges off the coast of Florida.

BUREAU OF LIGHTHOUSES

GEORGE R. PUTNAM, Commissioner

Maintenance of lighthouses and other aids to navigation. Establishment and maintenance of aids to navigation along civil airways.

Publication of Light Lists, Buoy Lists, and Notices to Mariners, giving information regarding these aids to navigation.

COAST AND GEODETIC SURVEY

E. LESTER JONES, Director

Survey of the coasts of the United States; publication of charts for the navigation of the adjacent seas, including Alaska, the Philippine Islands, Hawaii, the Virgin Islands, and the Canal Zone; interior surveys; magnetic surveys; tide and current observations; and hydrological investigations.

Publication of results through charts, current tables, current tables, and special publications.

BUREAU OF NAVIGATION

ARTHUR J. TYLER, Commissioner

Superintendence of commercial marine navigation; supervision of registering, enrolling, and numbering, etc., of vessels under the United States flag; the annual publication of a list of such vessels.

Enforcement of the navigation and inspection laws, including imposition of fees, fines, penalties, etc.

STEAMBOAT INSPECTION SERVICE

DICKERSON N. HOOVER, Supervising Inspector General

The inspection of merchant vessels, including boilers, hulls, and life-saving equipment, licensing of officers and crews, certification of able seamen and lifeboat men, and investigation of violations of steamboat inspection laws.

UNITED STATES PATENT OFFICE

THOMAS E. ROBERTSON, Commissioner

The granting of patents and the registration of trade-marks, prints, and labels after technical examination and official proceedings.

Maintenance of library with public access, containing copies of foreign and United States patents, trade-marks. Recording bills of sale, assignments, etc., of patents and trade-marks. Furnishing copies of patents containing to patents.

Publication of the weekly Official Gazette containing the patents and trade-marks issued.

RADIO DIVISION

W. D. TERRELL, Chief

Inspection of radio stations on ships; inspection of radio stations on shore, including broadcasting stations; licensing radio operators; assigning station call letters; enforcing the terms of the International Radiotelegraphic Convention; and examining and settling international radio accounts.