sidered that fluctuations in a company's profits from year to year may be very different from fluctuations in its volume of business or in the aggregate of its payroll. Profits are a comparatively narrow margin upon the total volume of business. Under favorable conditions they may rise more rapidly than the volume of the business or the aggregate of payrolls, and under unfavorable conditons they may fall more rapidly. An average profit of 5 per cent on the volume of business may rise to 10 per cent, or fall from 10 to 5, under changing conditions in production, trade and markets and thus effect a 50-100 per cent change with a comparatively small change in turnover. Mr. Welch takes no account of the greater variability of profits as compared with the total volume of business or wage payments.

To sum up, there is no propriety or validity in the comparison which is sought to be made by this line of the chart. In so far as any dividends are concerned, it represents an increase in the margin of profit in years when the industries were favored with an exceptional volume of business. Everyone familiar with business affairs knows that the net results of a year's business are very much affected by whether or not the last 10 or 15 per cent of capacity is employed.

The chart line representing capital expansion is based on the amount of new capital issues as compiled by the *Commercial and Financial Chronicle*, and is supposed to support the claim of excessive profits and excessive increase of productive capacity. This line also is based on figures for all kinds of corporations. Consideration should be given to the fact that during these boom years an important part of new flotations was not for the purpose of providing funds to increase production but for the formation of investment trusts and holding companies, whose activities were in the main confined to the buying of outstanding stocks of well-established companies for investment or speculative purposes. Moreover, the capital thus raised was largely obtained through credit inflation, and did not represent the investment of saved income accruing from the operation of the industries, as the article implies. In 1929, of the net total of $9,174,000,000 of capital issues for all purposes, as compiled by the *Chronicle*, $3,712,000,000, or approximately 40 per cent, are classified as investment trusts and miscellaneous companies. Mr. Welch does not bother to discriminate in matters of this kind.

So much for Chart V and its lines set up for comparison. It is evident that none of the several sets of figures bears any definite or significant relation to the others. They are not comparable and prove nothing.

I wish now to refer to Charts VII and VIII, given to show changes in the relative position of certain factors in industry in the periods 1899-1914 and 1914-29. So far as I know, these charts make a true showing. It is known that from the year 1900 farm products and raw materials were gaining relatively over wages and "value added by manufacture," with selling prices in between.

The situation in the period 1899-1913 and the later years to 1929 is described in the new volume recently issued by the National Bureau of Economic Research, Inc., entitled "Economic Tendencies, Aspects of Pre-War and Post-War Changes," prepared by Professor Frederick C. Mills, of Columbia University. Professor Mills says of the period 1899-1913 (p. 68):

Summarizing and contrasting price and production movements, we have seen that the period immediately preceding the World War was marked by an increase in the volume of agricultural production (in raw and processed form) at a rate approximately equal to the rate of growth of population. The output of non-agricultural industries was growing at a much more rapid rate. Among prices these tendencies were reversed. The terms of exchange between agricultural and non-agricultural industries were being altered to the distinct advantage of the former. The average real price per unit of agricultural products (that is, the purchasing power of such products in terms of all commodities at wholesale) was increasing at a rate of 0.7 per cent per year. Their purchasing power in terms of non-agricultural products was increasing at the rate of 1.3 per cent a year. This change was accompanied by corresponding declines in the purchasing power of the products of non-agricultural industries. These tendencies contributed to a definite improvement in the status of the farmer.

This illustrates the fundamental importance of equilibrium in industry and of the truth that exchange relationships between different groups of the economic system are more important to trade and employment than uniform changes in the general price level.

The war reversed the pre-war situation. By cutting off exports of foodstuffs and raw materials from Russia a great stimulus was given to production in these lines everywhere outside of Europe, and an unlimited and imperative demand for manpower caused a phenomenal rise in wages. Mr. Welch now insists that wages should be maintained regardless of the fact that the war stimulus has caused the price of these products to decline to approximately one-half of their pre-war level and thereby deprived the producers of most of their purchasing power. At the same time there has been a reduction in the cost of living of wage earners and the insistence of important groups of the latter upon maintaining their wage advantage has been the principal cause of unemployment. Thus has been afforded another striking demonstration of the importance of the equilibrium in industry.

After 1914, and particularly after 1921, lower costs of raw materials and higher wages caused "value added by manufacture" to take first place in Chart VII while "value of product" (selling value) still remained in the middle place.

This is a very interesting development because it refutes from Mr. Welch's own evidence his sensational comments on Chart VIII. He relies on this to prove the contention that rising profits and increasing production had unbalanced the situation. Chart VII supports the figures given above and shows that from 1923-29 the average percentage of manufacturing profits did not increase, for the reason that selling prices were falling while the volume of business was increasing. Industrial gains are distributed to the public not alone through rising wages but also through falling prices, a fact which throughout his thinking Mr. Welch fails to recognize. He sees wages as purchasing power to the recipients, but never as a factor in the cost of living or in the purchasing power of consumers.

On page 176 Mr. Welch refers to the National Bureau of Economic Research, Inc., as an authority, and it *is* an excellent authority. We have quoted above from its new volume by Professor Mills. This work affords the most complete and authoritative review of economic developments in the United States in the thirty years from 1899 to 1929. On page 380 appears an index of average selling price per unit of product for the manufacturing industries in the census years 1923-29. It is as follows: 1923—100.0; 1925—99.0; 1927—91.9; 1929—90.8.

Mr. Welch relies on Chart VIII to prove the alleged increase in profits. It shows an increase in "overhead plus profits" after 1923, without a division of these two factors. An important factor in overhead is fixed charges, that is, interest on debt, depreciation and obsolescence charges, and it is not improbable that in the pressure of hard competition selling expenses may have tended to increase. An important factor already referred to was the extraordinary utilization in several of these years of the full productive capacity. The main point

to be borne in mind, however, is that in the period 1923-29, despite increasing "overhead and profits," prices to consumers were falling, as Professor Mills shows. In other words, the increase in aggregate profits which obsesses Mr. Welch was considerably more than covered by the increasing efficiency of the industries and so had no influence on the unbalance of the situation, as Mr. Welch represents. The depression did not begin with the highly organized industries, but in the disruption of relationships between these industries and the primary industries, and occurred largely because of wartime costs (wages) in the former.

The volume, "The National Income and Its Purchasing Power," referred to by Mr. Welch, published in 1930 by the National Bureau of Economic Research, Inc., and prepared by Willford I. King, one of the most experienced and highly regarded authorities on the subject, contains, on page 124, a table showing "per cents which total amounts received by employes as wages, salaries, pensions, etc., constitute of the entire realized income drawn by individuals from the various industries" in the years from 1909 to the latest year for which the figures could be compiled. This table shows that the per cents received by employes of the manufacturing industries from 1913-25 inclusive were as follows:

1913—79.8	1919—84.7
1914—79.4	1920—87.6
1915—79.8	1921—83.3
1916—76.8	1922—86.1
1917—78.5	1923—85.5
1918—82.8	1924—85.7
1925—87.8	

This shows that of the aggregate amount drawn from manufacturing industries in 1913 as an account of capital wages and salaries of employes amounted to 79.8 per cent while dividends and interest took up the remaining 20.2 per cent. In 1925, the last year for which figures were available, wages and salaries amounted to 87.8 per cent and dividends, interest and rent accounted for the remaining 12.2 per cent. This is further proof from the record that labor's share of the proceeds of the industries was not declining in the twenties, but rising. Although Professor King's calculations do not come down past 1925, the fact that they were in harmony with the official income figures indicates that the latter may be accepted for the remaining years. Doubtless Professor King's figures are based upon income and census figures.

It may be added that to the extent that the wage-and-salary class owned stocks or bonds, either directly or as savings-bank depositors or life-insurance policy holders, they shared in the 12.2 per cent which went to capital in 1925.

The theory that investment of the profits of modern industry tends to increase production faster than purchasing power available for consumption has had considerable vogue, but the argument for it does not stand examination. It usually fails to take account of two factors: viz.: the influence of the new investments in lowering prices and the fact that disbursements for the investment of capital give employment to labor, the same as other disbursements.

The return of profits to industry for the purpose of cheapening and increasing production has been going on since the beginning of machine production, and even before. Mr. Welch admits that the classical answer to his argument is that goods and services pay for each other. The only real problem is that of maintaining the equilibrium of production and exchange.

In the new book referred to above (Professor Mills') there is found a vindication of the modern economic system that should satisfy any critic who will make allowance for the fact that it is a free system, dependent on intelligent co-operation among its members and subject to the imperfections inherent in human nature itself. Professor Mills has compiled the remarkable figures given herewith. They show that in the thirty-year period covered in his review, production in the manufacturing industries of this country increased at the rate of approximately 3 per cent per worker per year. The figures by census periods follow:

Census Year	*Physical Volume of Production*	*Number of Wage Earners*	*Output per Wage Earner*
1899	100	100	100
1904	120.2	108.1	111.2
1909	154.5	130.0	118.9
1914	176.3	136.1	129.6
1919	225.1	169.4	133.0
1921	186.3	136.2	136.9
1923	275.6	177.3	155.5
1925	282.2	169.1	166.9
1927	287.2	163.6	175.7
1929	331.4	164.2	189.7
	7.0%	2.1%	3.0%

(From Tables on pp. 26, 192 and 290)

Another interesting feature of this review is the showing of the relative production in the form of consumption goods and goods for capital investment. This has a direct bearing on the theory that the facilities for production were being increased too rapidly. In the pre-war period, 1899-1914, the production of consumption goods increased at the annual rate of 2.6 per cent (p. 21) and the production of capital goods at the annual rate of 5 per cent. In the period from 1923-29 the corresponding percentages were 3.7 and 6.4 (p. 280). In these calculations consumption goods include residential construction and capital goods include non-residential construction and public works. The rate of increase for consumption goods in 1923-29 over 1899-1914 was 42.3 per cent. For capital goods it was 28 per cent. This seems completely to dispose of the theory so confidently advanced by Mr. Welch and others and held by Mr. Welch as his second thesis.

The foregoing answers all the closet philosophers, technocrats and agitators of various types who take advantage of the present state of disorder to attack the existing economic system. There is not a skip in the record of progress in any census period over these thirty years. This is sufficient proof that the progress has not been fortuitous but guided by economic law.

It is true that there have been periods of crisis and depression, but there is good reason to doubt that any of these has been caused by the normal workings of the economic system, or that any security against such periods would be assured by a higher degree of what is called "social control," which means control by the political authorities. It was the latter who made the world war and the peace treaties, who have been attempting to collect impossible sums across international boundaries, who have raised the trade barriers and attempted the numerous price-fixing schemes that are responsible for trade confusion.

The limitations of space prevent my going into detailed review of the text of Mr. Welch's article. I should like to have given more attention to his theory that prosperity can be assured by a wage policy that assumes that purchasing power can be increased by raising wages and passing the cost on to the consumers, but does the propositon not answer itself?

On page 176, second column, Mr. Welch seems to recognize the fundamental importance of equilibrium in economic relations, and his attempt to hold industrial management respon-