

Table I shows the initial and final portions of a monthly series of relative deviations from trend of an index of economic activity in the United States, from 1899 to 1939, inclusive. Investigation has indicated the presence in this series of a fairly marked cycle closely approximating 41 months in duration. The problem is to apply the Bartels test to this cycle as isolated by methods of harmonic analysis, and so to evaluate the probability that it could be the result of chance conformations in the data.

The first step is to break up the entire series into segments each 41 months in length. Each of these segments, of which there are twelve, is subjected to a standard harmonic analysis for a 41-month period. The method of doing this, for the first and twelfth segments, is shown on Table II.¹ For each of the twelve analyses, the constants A and B are computed as described in Table II, and the twelve sets of values so derived, together with their averages and the sums of their squares, are tabulated in Table III.

Chart I² is a scatter diagram depicting the tendency of the twelve sets of A and B values to cluster about their average values. Each pair of A and B values determines a point "p" on the chart. The twelve sets thus determine twelve points, $p_1, p_2, p_3, \dots, p_{12}$, and the average values determine point "P". The vector Op_1 describes the phase and amplitude³ of the sinusoid fitted by means of harmonic analysis to the first segment of the series, the vector Op_2 represents that fitted to the second segment, and so on. Vector OP is the average of the twelve individual vectors, and represents the result of fitting a single 41-month sinusoid to the entire series. The degree to which the individual points $p_1, p_2, p_3, \dots, p_{12}$ cluster about P as contrasted to about O is, according to this significance test, indicative of the probable statistical genuineness of the 41-month cycle in this series.

As shown by Table III, the average vector OP has an amplitude of 133.49, and the quadratic mean of the amplitudes of the twelve individual vectors is 203.49. If we assume that there is no real 41-month periodicity in the data under study, and

TABLE I
AN INDEX OF ECONOMIC ACTIVITY IN THE UNITED STATES
PERCENTAGE DEVIATIONS FROM TREND
(INITIAL AND FINAL PORTIONS ONLY)

INITIAL PORTION			
	1899	1900	1901
JANUARY	- 1.8	- 0.4	- 4.3
FEBRUARY	- 2.8	- 1.7	- 1.2
MARCH	- 0.2	- 3.0	+ 0.2
APRIL	+ 0.2	- 3.8	+ 4.1
MAY	+ 2.4	- 4.9	+ 6.2
JUNE	+ 2.8	- 9.1	+ 6.5
JULY	+ 4.1	- 10.2	+ 7.2
AUGUST	+ 3.8	- 11.6	+ 5.0
SEPTEMBER	+ 3.4	- 11.2	+ 4.2
OCTOBER	+ 3.4	- 10.7	+ 1.7
NOVEMBER	+ 1.4	- 10.3	+ 1.8
DECEMBER	+ 3.8	- 7.1	- 0.2
FINAL PORTION			
	1937	1938	1939
JANUARY	+ 1.4	- 28.6	- 12.3
FEBRUARY	+ 3.3	- 26.9	- 11.3
MARCH	+ 5.1	- 26.5	- 10.5
APRIL	+ 6.0	- 27.7	- 13.0
MAY	+ 6.5	- 28.1	- 13.0
JUNE	+ 3.4	- 27.9	- 10.2
JULY	+ 2.5	- 23.4	- 9.8
AUGUST	+ 0.6	- 19.7	- 7.8
SEPTEMBER	- 3.0	- 17.8	- 2.3
OCTOBER	- 14.2	- 16.8	+ 3.8
NOVEMBER	- 24.3	- 12.5	+ 6.0
DECEMBER	- 29.9	- 13.4	+ 6.2

that, therefore, the apparent cyclical movements are the result of chance alone, then the twelve p-points must be considered as random selections from a field of such points distributed about and centered at O. Moreover, if the condition is purely random, the dispersion of all the points in the field about O should not be greatly different from the dispersion of the twelve selected points about O. Under such conditions, the expected amplitude of the single sinusoid fitted to the entire series may be computed as $203.49 \div \sqrt{12} = 58.74$, as contrasted to the measured amplitude to its expectancy is $133.49 \div 58.74 = 2.27$. The probability that this occurs as the result of chance alone is $e^{-(2.27)^2} = \frac{1}{185}$, where e is the base of natural logarithms.⁴

The illustrative example given here is based on harmonic analysis, but the Bartels test may be applied to the results of other methods of cycle determination, as

TABLE II

41-MONTH HARMONIC ANALYSES OF FIRST AND TWELFTH SEGMENTS OF SERIES

(a) Month	(b) g*	(c)	(d)	(e)			(f)		
	(a+41)	Sin. θ	Cos. θ	1st Segment			12th Segment		
				Y#	Y Sin.θ	Y Cos.θ	Y #	Y Sin.θ	Y Cos.θ
1	2.44%	0.153	0.988	-1.8	-.28	-1.78	-6.1	-.93	-6.03
2	4.88	.302	.953	-2.8	-.85	-2.67	-3.7	-1.12	-3.53
3	7.32	.444	.896	-0.2	-.09	-0.18	-3.5	-1.55	-3.14
4	9.76	.576	.817	+0.2	+.12	+0.16	-1.7	-.98	-1.39
5	12.20	.694	.720	+2.4	+1.67	+1.73	+2.2	+1.53	+1.58
6	14.63	.795	.606	+2.8	+2.23	+1.70	+1.4	+1.11	+.85
7	17.07	.878	.478	+4.1	+3.60	+1.98	+3.3	+2.90	+1.58
8	19.51	.941	.338	+3.8	+3.58	+1.28	+5.1	+4.80	+1.72
9	21.95	.982	.190	+3.4	+3.34	+0.65	+6.0	+5.89	+1.14
10	24.39	.999	.039	+3.4	+3.40	+0.13	+6.5	+6.49	+.25
11	26.83	.994	-.115	+1.4	+1.39	-0.16	+3.4	+3.38	-.39
12	29.27	.964	-.265	+3.8	+3.66	-1.01	+2.6	+2.51	-.69
13	31.71	.912	-.409	-0.4	-.36	+0.16	+0.6	+.55	-.25
14	34.15	.839	-.543	-1.7	-1.43	+0.92	-3.0	-2.52	+1.63
15	36.59	.746	-.666	-3.0	-2.24	+2.00	-14.2	-10.59	+9.46
16	39.02	.636	-.771	-3.8	-2.42	+2.93	-24.3	-15.45	+18.74
17	41.46	.511	-.859	-4.9	-2.50	+4.21	-29.9	-15.28	+25.68
18	43.90	.374	-.927	-9.1	-3.40	+8.44	-28.6	-10.70	+26.51
19	46.34	.228	-.973	-10.2	-2.33	+9.92	-26.9	-6.13	+26.17
20	48.78	.076	-.997	-11.6	-.88	+11.57	-26.5	-2.01	+26.42
21	51.22	-.076	-.997	-11.2	+.85	+11.17	-27.7	+2.11	+27.62
22	53.66	-.228	-.973	-10.7	+2.44	+10.41	-28.1	+6.41	+27.34
23	56.10	-.374	-.927	-10.3	+3.85	+9.55	-27.9	+10.43	+25.86
24	58.54	-.511	-.859	-7.1	+3.63	+6.10	-23.4	+11.96	+20.10
25	60.98	-.636	-.771	-4.3	+2.73	+3.32	-19.7	+12.53	+15.19
26	63.41	-.746	-.666	-1.2	+.90	+.80	-17.8	+13.28	+11.85
27	65.85	-.839	-.543	+0.2	-.17	-.11	-16.8	+14.10	+9.12
28	68.29	-.912	-.409	+4.1	-3.74	-1.68	-12.5	+11.40	+5.11
29	70.73	-.964	-.265	+6.2	-5.98	-1.64	-13.4	+12.92	+3.55
30	73.17	-.994	-.115	+6.5	-6.46	-0.75	-12.3	+12.23	+1.41
31	75.61	-.999	.039	+7.2	-7.19	+0.28	-11.3	+11.29	-.44
32	78.05	-.982	.190	+5.0	-4.91	+0.95	-10.5	+10.31	-2.00
33	80.49	-.941	.338	+4.2	-3.95	+1.42	-13.0	+12.23	-4.39
34	82.93	-.878	.478	+1.7	-1.49	+0.81	-13.0	+11.41	-6.21
35	85.37	-.795	.606	+1.8	-1.43	+1.09	-10.2	+8.11	-6.18
36	87.80	-.694	.720	-0.2	+.14	-0.14	-9.8	+6.80	-7.06
37	90.24	-.576	.817	+1.0	-.58	+0.82	-7.8	+4.49	-6.37
38	92.68	-.444	.896	+1.7	-.75	+1.52	-2.3	+1.02	-2.06
39	95.12	-.302	.953	+2.4	-.72	+2.29	+3.8	-1.15	+3.62
40	97.56	-.153	.988	+2.2	-.34	+2.17	+6.0	-.92	+5.93
41	100.00	-	1.000	+2.6	0	+2.60	+6.2	0	+6.20
Total				X	-16.96 (A)	92.94 (B)	X	132.86 (A)	254.50 (B)

*Expressed as Percentages of 360°

#From Table I.

well. As in the case described above, the test depends on the relationship between the amplitude of the cycle fitted to the entire series under study and the expected amplitude as derived from the individual cycles fitted to the successive segments of the series.

It should be pointed out that the Bartels test assumes that genuine periodicities tend towards fixity in both period and amplitude. For, any variations, either systematic or random, in the length of the individual cycles tend to reduce the amplitude of the cycle curve fitted to the entire series through the averaging of out-of-phase ordinates, and so to reduce the final probability that the cycle is genuine. Likewise, variations in amplitude of individual cycles increase the expected average amplitude through the use of the quadratic mean, without proportionately increasing the amplitude of the overall cycle curve, and so also reduce the computed probability of genuineness. Hence, for comparability of results, it is generally advisable to express the series, as well as its time scale, if possible, in terms which stabilize to the fullest extent logically consistent with the nature of the series, the amplitude and period of the cycle under test. In this connection, it is usually not feasible to do much with the time scale, but often a change in the form of the series itself will tend to stabilize the cyclical amplitudes involved. For example, in the case used above in illustrating the significance test, the economic data were expressed as relatives to a long-term trend line in preference to absolute deviations, inasmuch as it resulted in a more stable cycle and also because it seemed the more reasonable approach. Had absolute deviations been used, the final probability would have been of the order of $\frac{1}{165}$.

November, 1944

Footnotes

¹The values of sine and cosine used in Table II were taken from the trigonometric table shown in the Appendix. This table shows directly the values of sine θ and cosine θ for values of θ expressed as per-

TABLE III

TABULATION OF RESULTS OF HARMONIC ANALYSIS OF TWELVE SEGMENTS OF SERIES

SEGMENT	A (FROM TABLE II)	B (FROM TABLE II)	A ² + B ²
1	- 16.96	+ 92.94	8,925.49
2	- 11.05	+ 143.68	20,766.04
3	+ 308.14	- 29.18	95,801.73
4	+ 66.13	+ 70.25	9,308.24
5	+ 131.35	+ 115.42	30,574.60
6	+ 108.94	- 63.35	15,881.15
7	+ 236.80	+ 184.75	90,206.80
8	- 4.90	+ 110.45	12,223.21
9	- 24.97	+ 109.94	12,710.30
10	+ 321.10	+ 34.98	104,328.81
11	- 86.42	+ 79.24	13,747.39
12	+ 132.86	+ 254.50	82,422.03
TOTAL	+1,161.02	+1,103.62	496,895.79
AVERAGE	+ 96.75	+ 91.97	41,407.98

AVERAGE AMPLITUDE = $\sqrt{96.75^2 + 91.97^2} = 133.49$

QUADRATIC MEAN OF TWELVE INDIVIDUAL AMPLITUDES = $\sqrt{41,407.98} = 203.49$

centages of 360°. It is particularly useful in harmonic analysis, as it eliminates the step of converting to degrees, minutes, and seconds, angles which are much more readily expressed in percentage form.

²Chart I is essentially a 'harmonic dial', differing from it only in using rectangular coordinates in place of polar. The construction of the chart is useful in illustrating the implications of the test and in presenting visually the results of the test, but, in practice, the final probabilities may be determined directly from the results computed as in Table III.

³The distance $Op_1 = \sqrt{A_1^2 + B_1^2}$, and therefore does not equal the amplitude of the fitted sinusoid, but is a multiple of that amplitude. This amplitude "a₁" may be derived, if desired, from the equation $a_1 = \frac{2}{\sqrt{2}} \sqrt{A_1^2 + B_1^2}$.

⁴As an alternative approach, Bartels also assumes P to be the true point center, and computes the probability that the center of the twelve points could be as far from P as O is. As compared with the method outlined above, such an approach gives an even smaller probability that the cycle is of chance origin.

CHART I

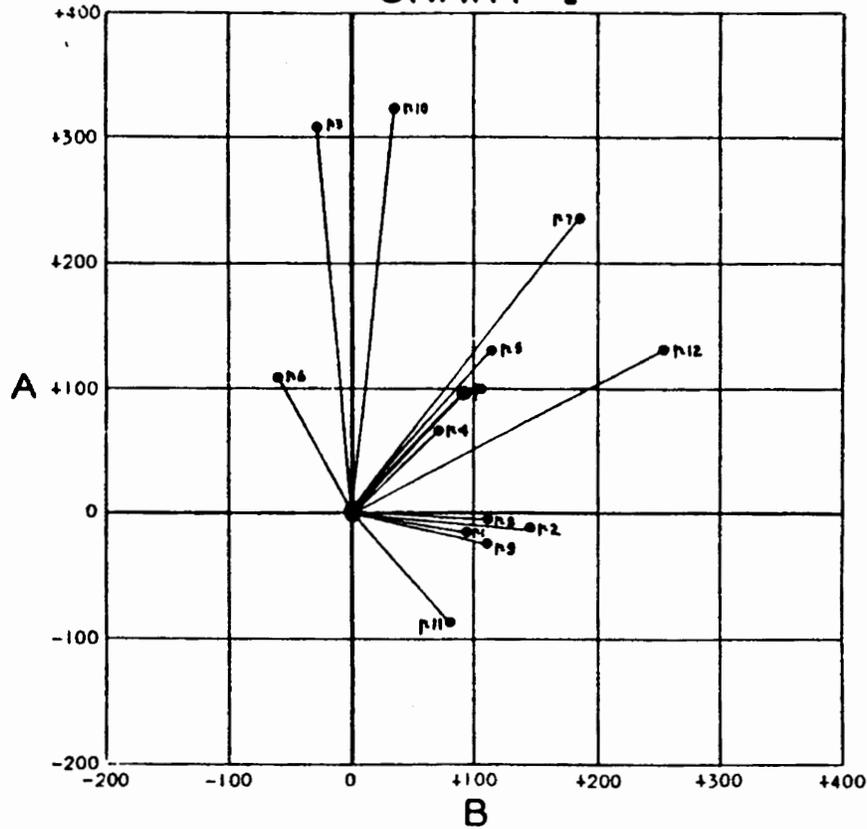


TABLE OF EXPONENTIALS

Values of e^n , From $n = 1.0$ to $n = 10.9$
 ($e = 2.71828$)

n	.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1	2.72	3.00	3.32	3.67	4.06	4.48	4.95	5.47	6.05	6.69
2	7.39	8.17	9.02	9.97	11.0	12.2	13.5	14.9	16.4	18.2
3	20.1	22.2	24.5	27.1	30.0	33.1	36.6	40.4	44.7	49.4
4	54.6	60.3	66.7	73.7	81.4	90.0	99.5	110	122	134
5	148	164	181	200	221	245	270	299	330	365
6	403	446	493	545	602	665	735	812	898	992
7	1097	1212	1339	1480	1636	1808	1998	2208	2441	2698
8	2981	3294	3639	4024	4447	4915	5431	6003	6635	7333
9	8103	8954	9894	10940	12090	13360	14760	16320	18040	19930
10	22030	24340	26890	29740	32860	36320	40130	44360	49030	54180

A TABLE OF SINES AND COSINES OF ANGLES
EXPRESSED AS PERCENTAGES OF PERIGONS
(360° = 100%)

Sin	.0	.2	.4	.6	.8	Cos		Sin	.0	.2	.4	.6	.8	Cos	
%	(All Figures Positive)					%		%	(All Figures Negative)					%	
0	0	.012	.025	.038	.050	75		50	0	.012	.025	.038	.050	25	
1	.063	.075	.086	.100	.113	76		51	.063	.075	.086	.100	.113	26	
2	.125	.138	.150	.163	.175	77		52	.125	.138	.150	.163	.175	27	
3	.187	.200	.212	.224	.236	78		53	.187	.200	.212	.224	.236	28	
4	.249	.261	.273	.285	.297	79		54	.249	.261	.273	.285	.297	29	
5	.309	.321	.333	.345	.356	80		55	.309	.321	.333	.345	.356	30	
6	.368	.380	.391	.403	.414	81		56	.368	.380	.391	.403	.414	31	
7	.426	.437	.448	.460	.471	82		57	.426	.437	.448	.460	.471	32	
8	.482	.493	.504	.514	.525	83		58	.482	.493	.504	.514	.525	33	
9	.536	.546	.557	.567	.578	84		59	.536	.546	.557	.567	.578	34	
10	.588	.598	.608	.618	.628	85		60	.588	.598	.608	.618	.628	35	
11	.637	.647	.656	.666	.675	86		61	.637	.647	.656	.666	.675	36	
12	.684	.694	.702	.712	.720	87		62	.684	.694	.702	.712	.720	37	
13	.729	.737	.746	.754	.762	88		63	.729	.737	.746	.754	.762	38	
14	.770	.778	.786	.794	.802	89		64	.770	.778	.786	.794	.802	39	
15	.809	.816	.823	.831	.838	90		65	.809	.816	.823	.831	.838	40	
16	.844	.851	.857	.864	.870	91		66	.844	.851	.857	.864	.870	41	
17	.876	.882	.888	.894	.899	92		67	.876	.882	.888	.894	.899	42	
18	.905	.910	.915	.920	.925	93		68	.905	.910	.915	.920	.925	43	
19	.930	.934	.939	.943	.947	94		69	.930	.934	.939	.943	.947	44	
20	.951	.955	.958	.962	.965	95		70	.951	.955	.958	.962	.965	45	
21	.968	.972	.974	.977	.980	96		71	.968	.972	.974	.977	.980	46	
22	.982	.984	.987	.989	.990	97		72	.982	.984	.987	.989	.990	47	
23	.992	.994	.995	.996	.997	98		73	.992	.994	.995	.996	.997	48	
24	.998	.999	.999	1.000	1.000	99		74	.998	.999	.999	1.000	1.000	49	
25	1.000	1.000	1.000	.999	.999	0		75	1.000	1.000	1.000	.999	.999	50	
26	.998	.997	.996	.995	.994	1		76	.998	.997	.996	.995	.994	51	
27	.992	.990	.989	.987	.984	2		77	.992	.990	.989	.987	.984	52	
28	.982	.980	.977	.974	.972	3		78	.982	.980	.977	.974	.972	53	
29	.968	.965	.962	.958	.955	4		79	.963	.965	.962	.958	.955	54	
30	.951	.947	.943	.939	.934	5		80	.951	.947	.943	.939	.934	55	
31	.930	.925	.920	.915	.910	6		81	.930	.925	.920	.915	.910	56	
32	.905	.899	.894	.888	.882	7		82	.905	.899	.894	.888	.882	57	
33	.876	.870	.864	.857	.851	8		83	.876	.870	.864	.857	.851	58	
34	.844	.838	.831	.823	.816	9		84	.844	.838	.831	.823	.816	59	
35	.809	.802	.794	.786	.778	10		85	.809	.802	.794	.786	.778	60	
36	.770	.762	.754	.746	.737	11		86	.770	.762	.754	.746	.737	61	
37	.729	.720	.712	.702	.694	12		87	.729	.720	.712	.702	.694	62	
38	.684	.675	.666	.656	.647	13		88	.684	.675	.666	.656	.647	63	
39	.637	.628	.618	.608	.598	14		89	.637	.628	.618	.608	.598	64	
40	.588	.578	.567	.557	.546	15		90	.588	.578	.567	.557	.546	65	
41	.536	.525	.514	.504	.493	16		91	.536	.525	.514	.504	.493	66	
42	.482	.471	.460	.448	.437	17		92	.482	.471	.460	.448	.437	67	
43	.426	.414	.403	.391	.380	18		93	.426	.414	.403	.391	.380	68	
44	.368	.356	.345	.333	.321	19		94	.368	.356	.345	.333	.321	69	
45	.309	.297	.285	.273	.261	20		95	.309	.297	.285	.273	.261	70	
46	.249	.236	.224	.212	.200	21		96	.249	.236	.224	.212	.200	71	
47	.187	.175	.163	.150	.138	22		97	.187	.175	.163	.150	.138	72	
48	.125	.113	.100	.088	.075	23		98	.125	.113	.100	.088	.075	73	
49	.063	.050	.038	.025	.012	24		99	.063	.050	.038	.025	.012	74	

C. E. ARMSTRONG

Dear Member:

Here is the projection of stock market cycles to 1990 that you asked for. This projection will be revised and brought up to date for you during the coming year.

FOUNDATION FOR THE STUDY OF CYCLES

TREND AND CYCLES IN STOCK PRICES

FOR the past 86 years the trend of stock prices has been upward. Refer to Fig. 1 which charts as Curve A the Standard & Poor's Corporation Combined Stock Price Index, 1935-39=100, from 1871 through 1956. The trend is shown by the straight line marked B. It has advanced at the rate of 1.93% a year, compounded.

The percentages by which stock prices have been above or below trend are shown as Curve C. At first glance these fluctuations appear entirely random, but study shows that they act as if they were, at least in part, the effect of cyclic forces.

A preliminary cycle study of these fluctuations was made in 1944. That study used these same figures through 1943 and, in addition, used some rail stock price figures 1854-1870. Ten cycles were isolated, with the lengths and characteristics shown in the table below:

Cycle No.	Length in Years	Crest Nearest to Jan. 1, 1944	Strength
1	4.89	1944.63	3.5 %
2	5.50	1941.5	7.0
3	6.07	1941.92	6.0
4	6.86	1943.68	8.3
5	8.17	1946.03	8.2
6	9.2	1946.5	17.2
7	11.0	1941.5	3.8
8	12.0	1939.5	15.1
9	14.5	1943.0	12.25
10	21.0	1950.5	17.0

When expressed in logarithms the typical waves of all cycles seemed to be zigzag in shape and to be symmetrical.

These 10 cycles were then combined, wrapped around a trend as determined in 1939 by the Cowles Commission, and pro-

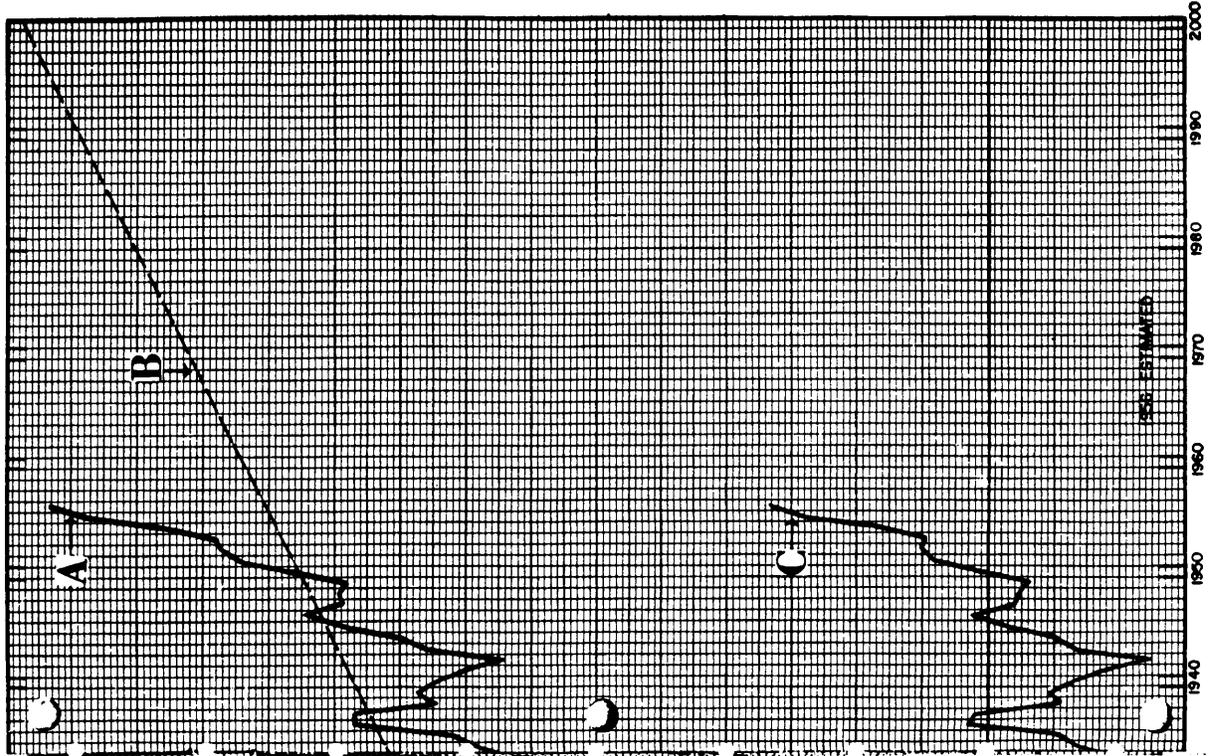
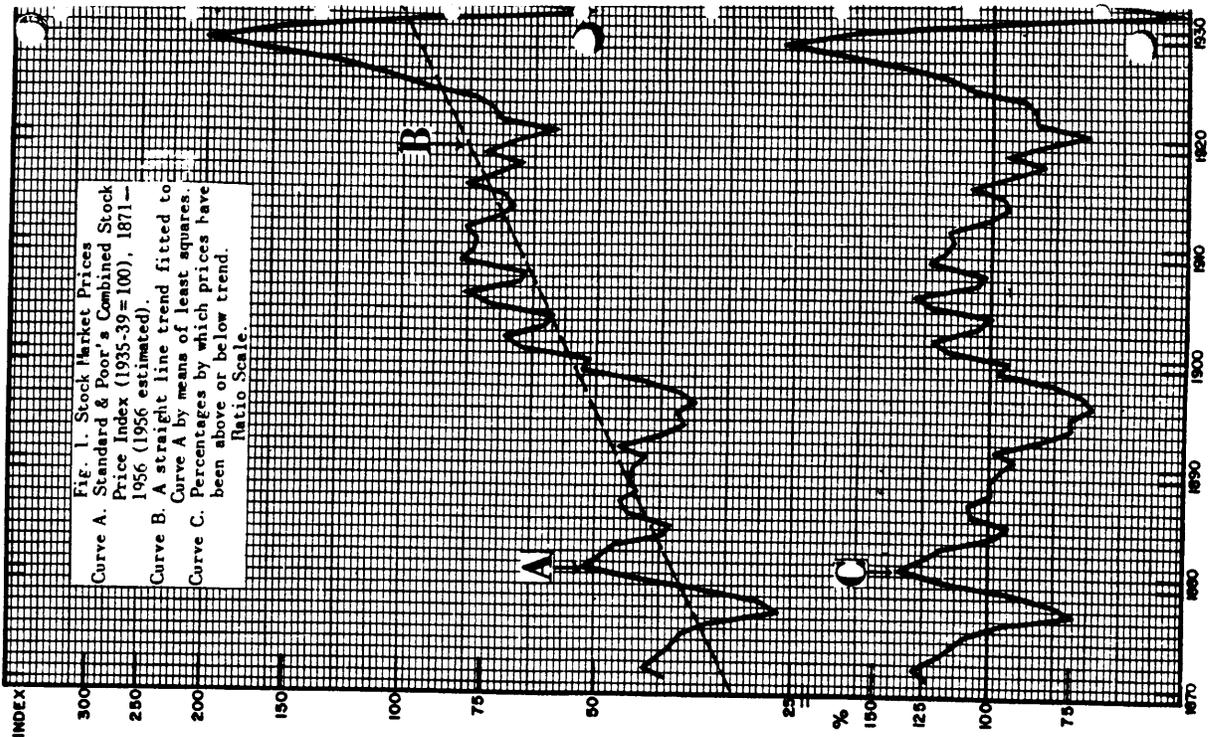
jected to 1990.

The projection forecast that the bull market which had started in 1942 would continue through 1944 and 1945 to reach a peak in 1946. It did. The projection then forecast that this peak would be followed by three years of decline to 1949. This also happened. The projection then forecast a five year bull market faltering in 1953 to end in 1954. The bull market occurred, it checked its rate of advance in 1953, but it did not end in 1954. Following 1954, the projection forecast a six year decline to end in 1960. Instead we have had—to Jan. 1, 1957—two additional years of advance. Whether the following four years will register a decline, no one yet knows.

Profit and loss from a series of imaginary transactions, starting in 1944, would have been as follows:

Year	Buy at	Sell and Short at	Cover at	Gain or Loss	% Gain or Loss
1944	99.8				
1946		139.9		40.1	40.2
1946		139.9			
1949			121.4	18.5	13.2
1949	121.4				
1952		187.7		66.3	54.6
1952		187.7			
1953			189.0	-1.3	-.69
1953	189.0				
1954		226.6		37.6	19.9
1954		226.6			
1960			?	?	?
1960	?				

This record shows gains of 127.9%, losses of .69%. This record makes the gains 185 times the losses on completed



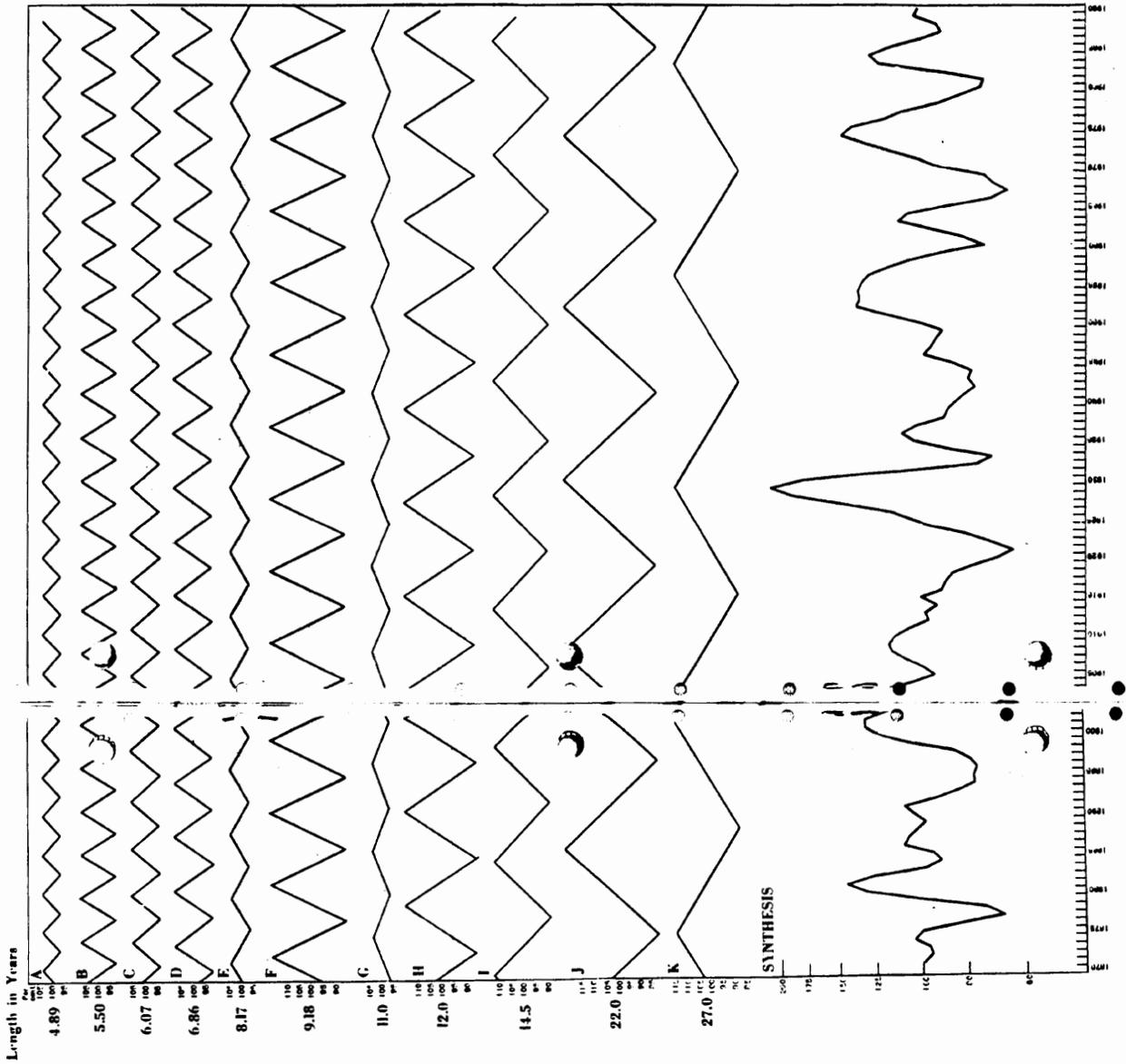


Fig. 2

**ELEVEN POSSIBLE CYCLES
IN THE STOCK MARKET
AND THEIR SYNTHESIS,
1871-1990**

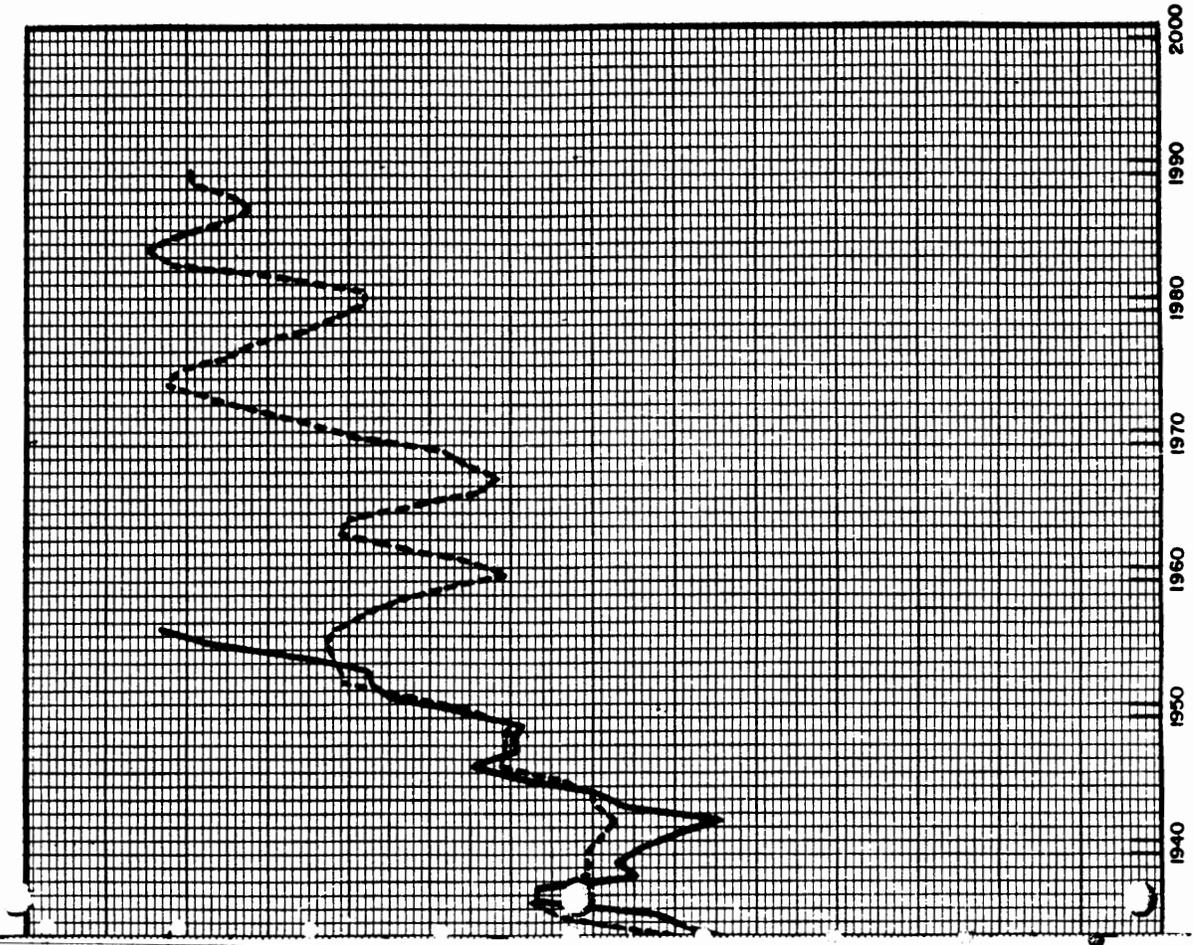
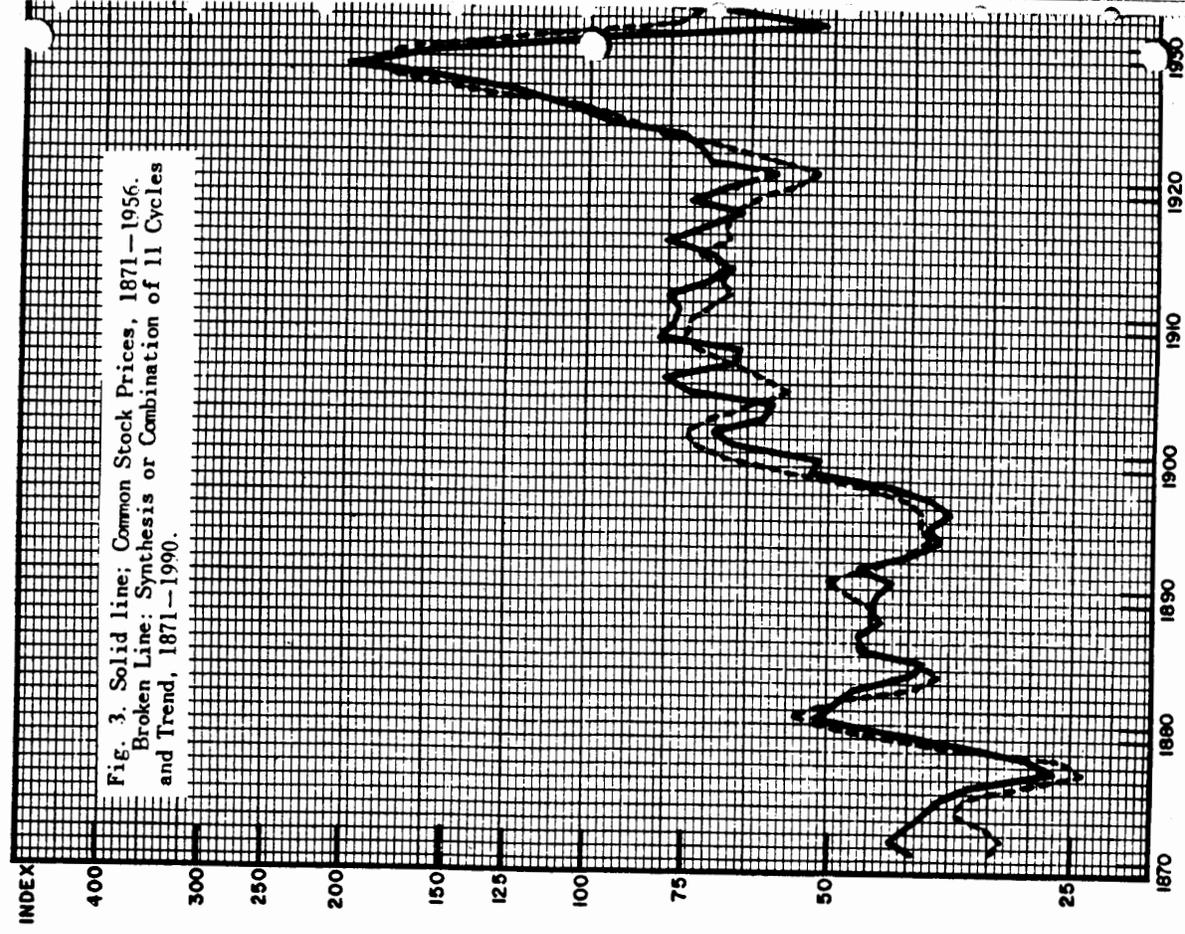
CURVES A to J inclusive diagram ten cycles which were revealed as possibly present in the stock market by a preliminary analysis made in 1943 and 1944.

Curves E and F and J were revised for length, amplitude, and timing in 1956. Curve K was added in 1956.

The synthesis shows the combined effect of cyclic forces of these wave lengths, strengths, and timings.

This chart illustrates the principle of cycle combination and shows how any cycle can sometimes be overwhelmed by several other cycles in combination.

If the indicated cycles have been correctly determined as to length, strength, and timing, if they are real, and if they continue, the projection should bear some relation to actual future behavior.



MY STOCK MARKET FORECAST OF 1944

By Edward H. Dewey, Director
Foundation for the Study of Cycles, Inc.

Summary

A projection of 10 possible stock market cycles made in January 1944 correctly called for 1948 as the end of the bull market, correctly called for 1949 as the end of the bear market, and called 1954 as the end of the bull market which followed. Up to date this forecast has come true with a gain-loss ratio of 156 to 1.

In view of this record, can 1954 be counted on as the peak of the bull market which began in 1949? The answer is no. The comparison of the synthesis of various cycles with actual behavior 1854-1943 shows many instances where a behavior has diverged from the cycle pattern determined in 1944. Many divergencies will doubtless occur in the future. A cycle study based only on cycles over 4 1/2 years in length cannot be counted upon to call the turns to the exact year. The success of the forecast 1943 to date is therefore partly a matter of luck. On the other hand the success of this forecast cannot reasonably be all luck. This fact that we are well above trend at the present time suggests that in the general neighborhood of 1954 we should see the peak, and that a fairly important bear market cannot reasonably be very far away.

IF a stock market projection which I made in 1944 continues to work, the bull market which began in 1949 is due to end this year.

What are the probabilities that it will do so?

To enable you to answer this question I must tell you something more about this projection: how it was made; how it has

worked; its strengths; its weaknesses.

Figures Used

To make this projection I made a study of the ups and downs of the Clement-Burgess Index of common stock prices (mostly railroads) 1854-1870 adjusted to tie on to the Standard and Poor's Corporation Combined Index, (industrials, rails, and utilities) 1871-1943. I used only annual averages.

Obviously the projection does not pertain directly to the *Axe-Houghton*, *New York Times*, *Dow-Jones*, or other indexes. Nor does it pertain directly to the *Standard and Poor's Corporation Railroad Index*, *Utility Index*, or *Industrial Index*. Even though all these indexes go up and down more or less together, it pertains directly only to the *Standard and Poor's Corporation Combined Index*, and must be judged by the behavior of that index alone.

Obviously, too, the projection must, like the data used, be in terms of annual averages. To make a projection on a monthly basis, or on a weekly, or on a daily basis, you must use monthly, weekly, or daily data. This is much harder.

The index used is charted in Fig. 1 below.

Trend Upward at 1.8% Per Annum

If you study Fig. 1 you will notice that the curve slopes irregularly upward from left to right. This upward slope is called the trend. It was determined in 1939 by the *Cowles Commission for Economic Research* to be typically 1.8% per annum, 1871 through 1938. Trend at the same rate is projected forward from 1939 through 1990, even though, with 15 more

transactions, 1944 to date.

It is now in order to audit the 1944 research to take account of the 13 additional years of data now available. This audit was begun in 1956. To date cycles number 5, 6, and 10 have been audited; cycle 11 has been added, and the trend has been revised to include later figures.

Present determination of cycle lengths and characteristics are as follows:

Cycle No.	Length in Years	Crest Nearest to Jan. 1, 1957	Strength
1	4.89	1959.3	3.5 %
2	5.50	1958.0	7.0
3	6.07	1954.06	6.0
4	6.86	1957.4	8.3
5	8.17	1954.1	4.7
6	9.18	1955.66	17.1
7	11.0	1952.5	3.8
8	12.0	1951.5	15.1
9	14.5	1957.5	12.25
10	22.0	1952.6	21.6
11	27.0	1956.5	14.3

All of these 11 cycles, correct for shape, timing, and strength, are diagrammed

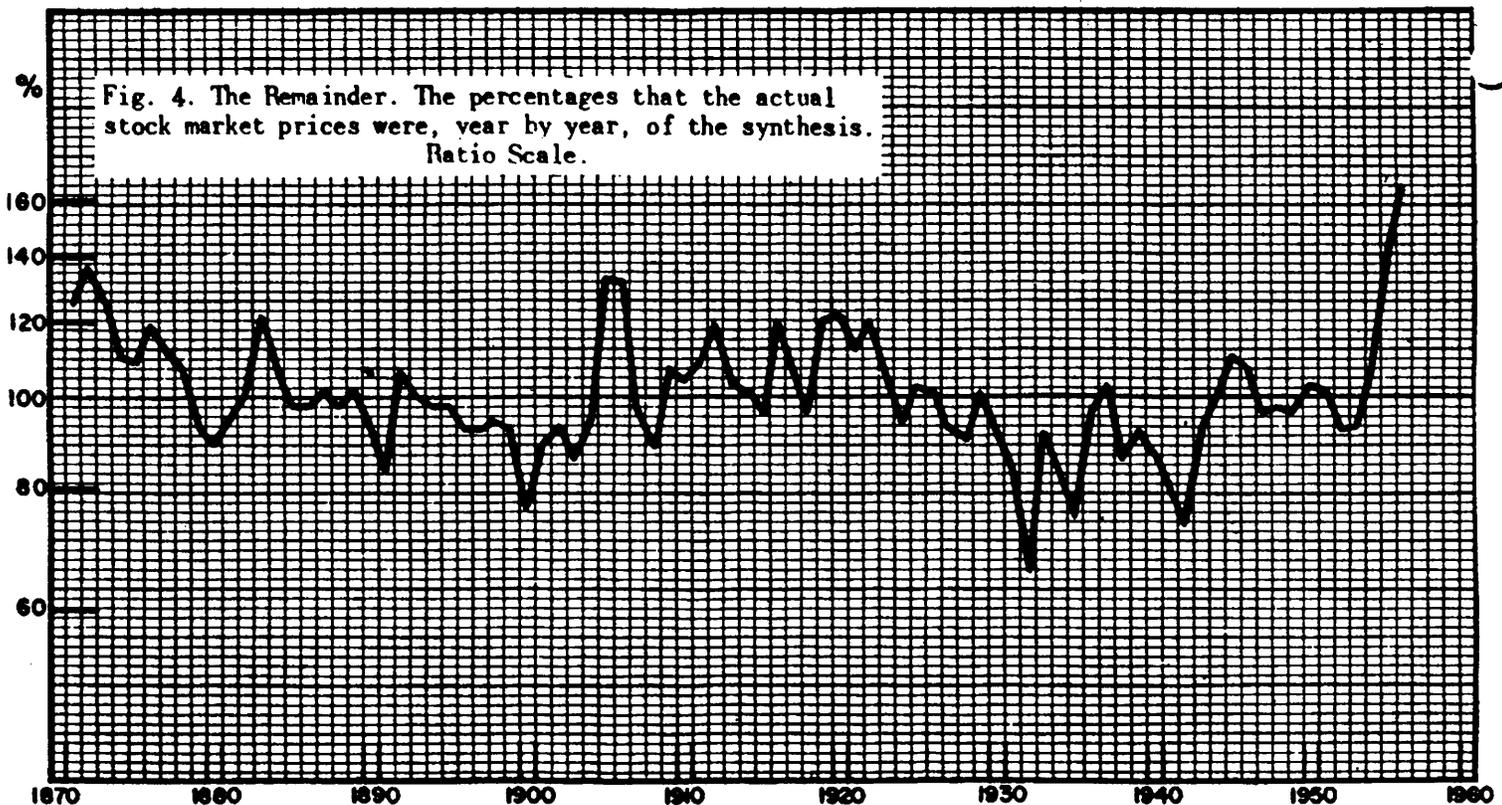
in Figure 2. Figure 2 also charts their combination or synthesis.

The combination of these 11 cycles and trend, projected to 1990, is shown as a broken line in Fig. 3. The solid line in Fig. 3 represents actual prices, 1871-1956 as drawn in Fig. 1.

The difference between the actual behavior and the cycles is shown in Fig. 4. This difference represents (a) random movements including distortion introduced by inflation, war, etc. (b) cycles not yet isolated, and (c) errors in the length, strength, and timing of the 11 cycles already isolated.

Remember that seven cycles remain to be audited, several more cycles will probably be added. This projection is merely the best I can do at the moment with the facilities available. It is intended for scientific purposes. It is useful to investors for background only. It is much too crude to use for purposes of actual purchase and sale. Still, a forecast which gave a gain-loss ratio of 185 to 1 over a ten year period isn't too bad, is it?

E.R.D.



THE STOCK MARKET CYCLE SYNTHESIS

I AM continuing the "audit" of my stock market work of 1944.

As you know, I reduced the length of the so-called 9-year cycle from 9.2 to 9.18 years. I left the length of the so-called 8-year cycle unchanged at 8.17 years. I added the 27-year cycle. I increased the length of the 21-year cycle to 22 years. I revised the trend. And now, as the next step in this audit, I am reducing the length of the so-called 6-year cycle from 6.07 years to 5.91 years.

As yet I have not audited the other 6 cycles, but I shall do so as rapidly as possible—I hope at the rate of about one a month. I also plan to compute the values of an inflation factor.

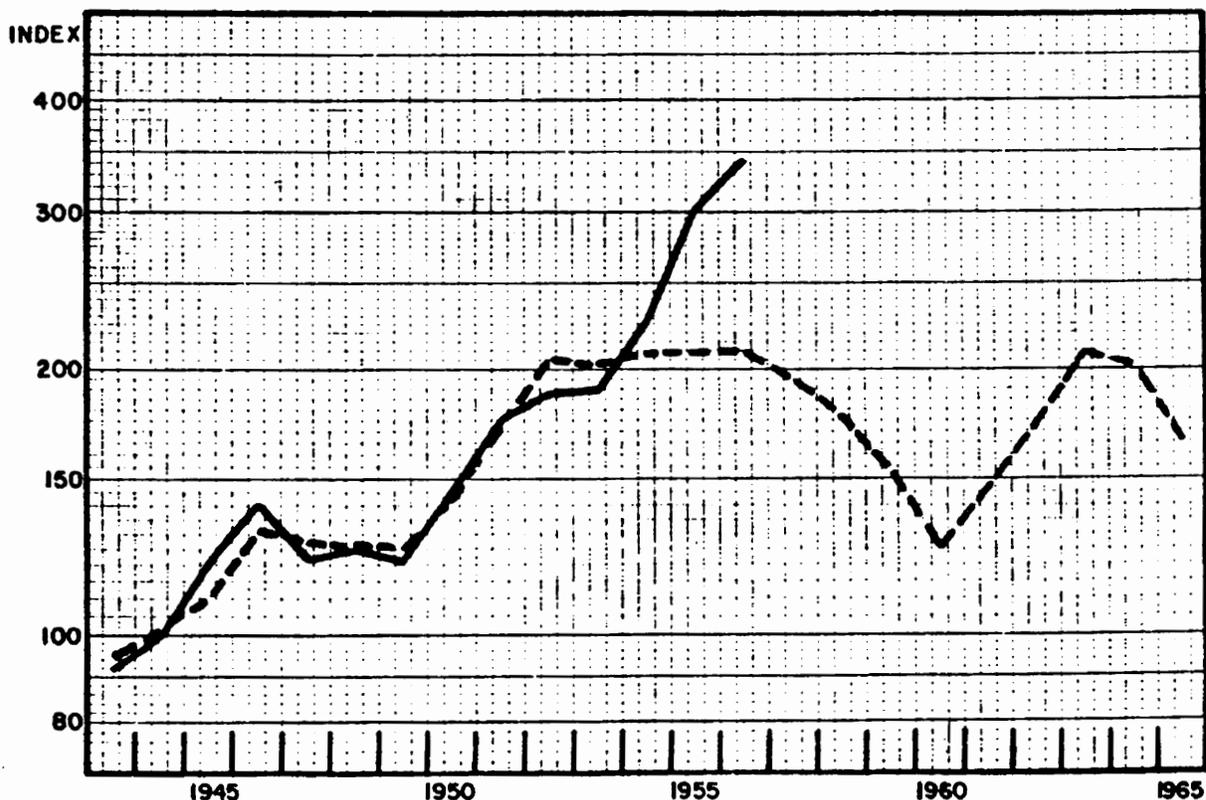
I have not yet reported upon the work

in connection with the 5.91-, 22-, and 27-year cycles, I shall do so in early issues.

The combination of the cycles as described above is shown below, 1943—1965 by means of a broken line. The actual prices are shown by a solid line. You will note that the combination crests in 1956 and declines to 1960, then advances to 1963.

Remember that this combination of cycles does not contain any cycles less than 4 years in length. Until we can introduce some shorter cycles we cannot hope to pinpoint the turns except by luck.

Remember too that the inflation factor is not yet included and that the audit is not yet completed. E.R.D.



Solid line; 1943--1956, Standard & Poor's Corporation Combined Stock Price Index (1935-39=100), as this index actually unfolded.

Broken line, 1943--1965, a combination of the 6 cycles as determined in 1944, trend and a 27-year cycle as determined in 1956 and the 22-, 9.18-, 8.17-, and 5.91-year cycles as revised in 1956.

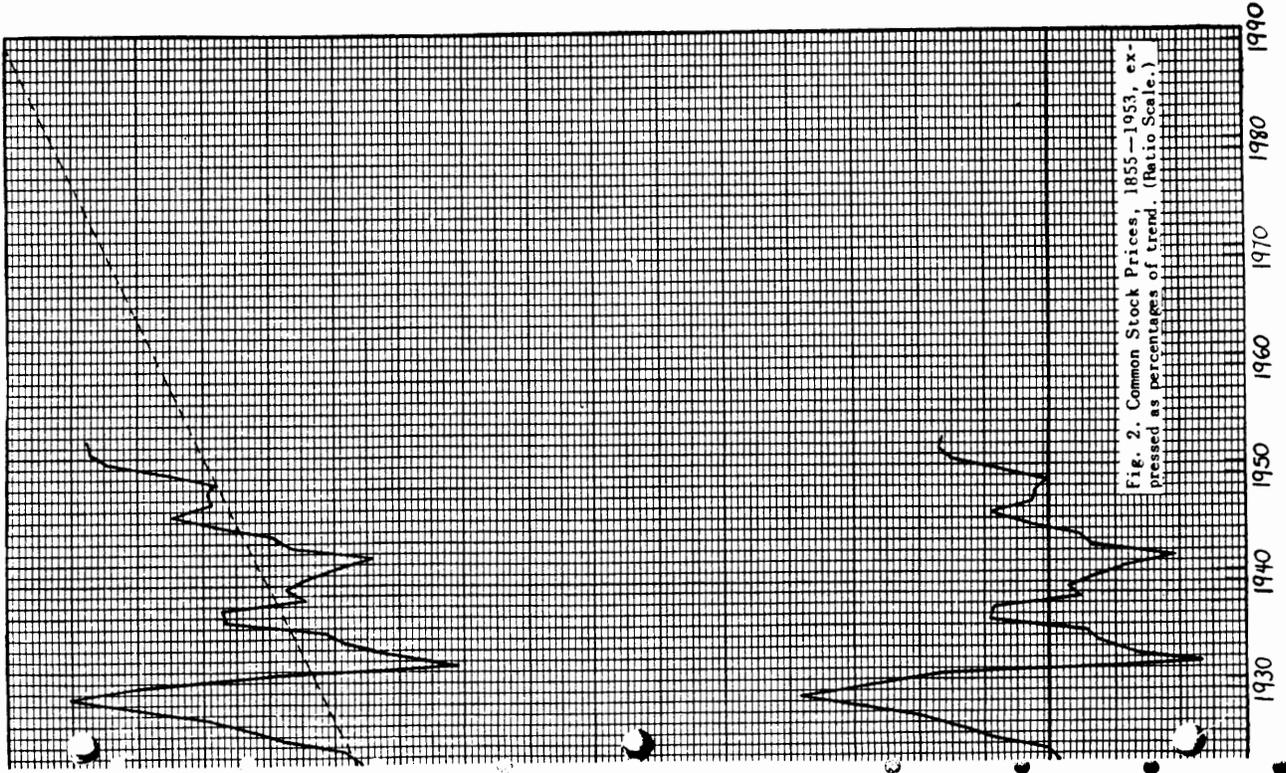
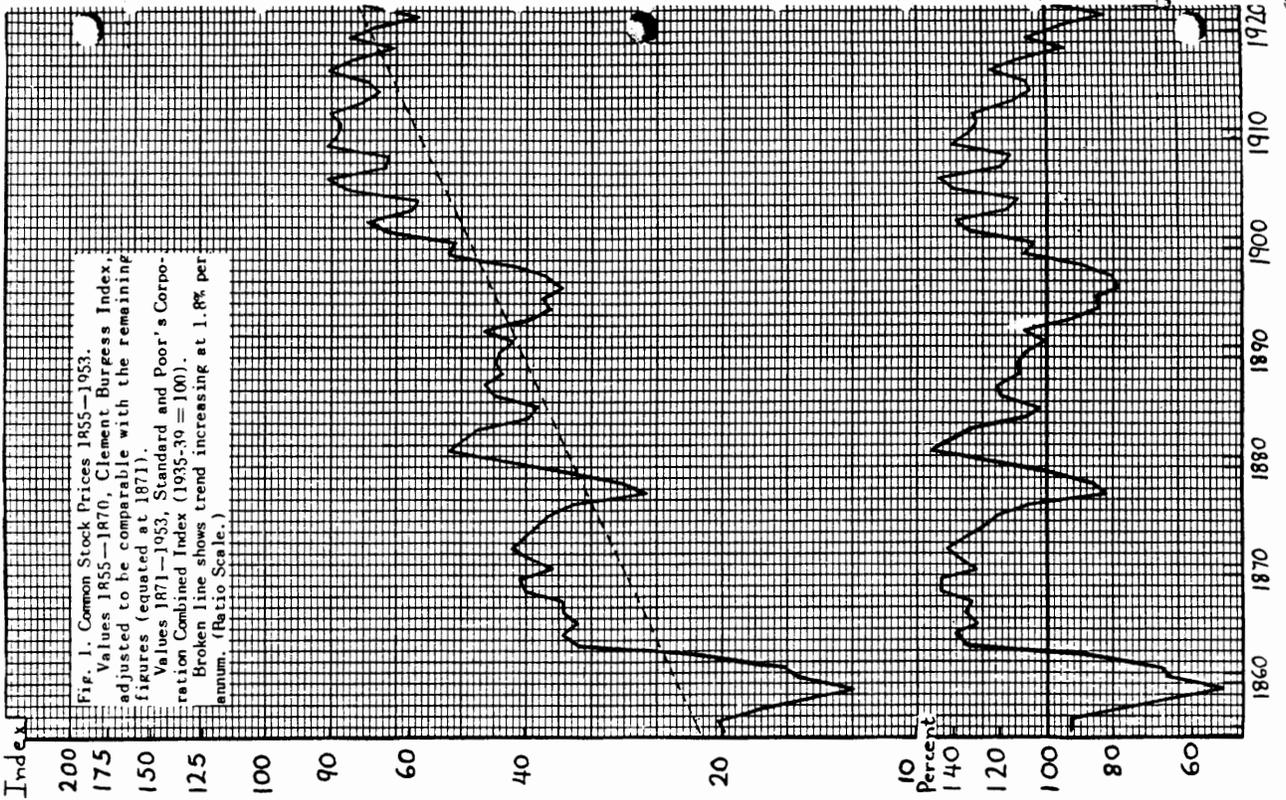
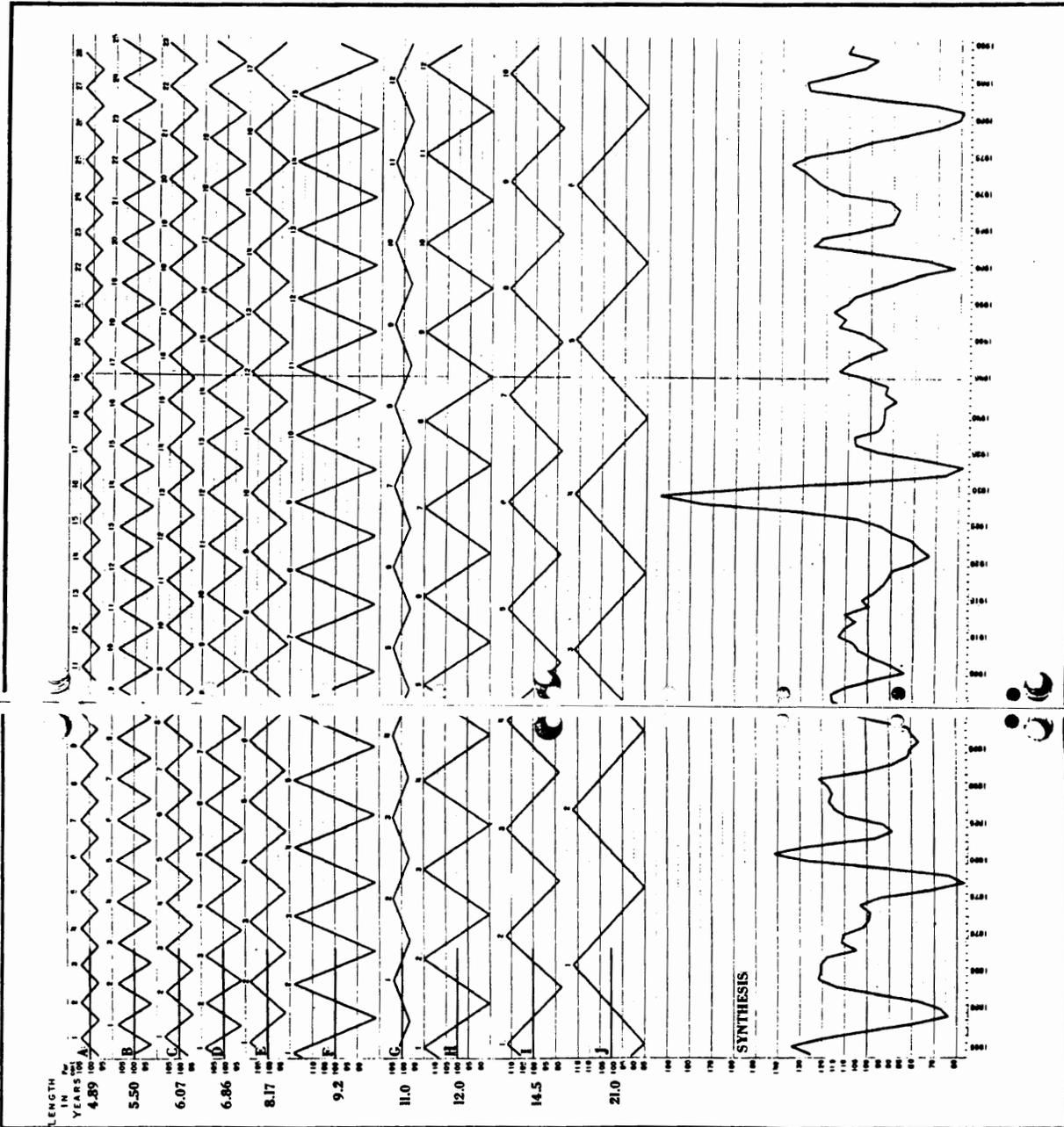


Fig. 3

TEN POSSIBLE CYCLES IN THE STOCK MARKET AND THEIR SYNTHESIS, 1854-1990



CURVES A to J inclusive diagram ten cycles which were revealed as possibly present in the stock market by a preliminary analysis made in 1943 and 1944.

The synthesis shows the combined effect of cyclic forces of these wave lengths. The synthesis shows the combined effect of cyclic forces of these wave lengths, strengths, and timings.

This chart illustrates the principle of cycle combination and shows how any cycle can sometimes be overwhelmed by several other cycles in combination.

The projection will bear some relation to actual future behavior only if the indicated cycles have been correctly determined as to length, strength, and timing, if they are real, and if they continue.

years of figures, a similar determination made at the present time might be slightly different. Also, it might be mentioned that other students might have adopted a smooth curved line instead of a smooth straight line to characterize trend. It is a matter of judgment, but, in this instance, relatively unimportant.

Rhythms Also Apparent

In addition to trend you will notice many more or less irregular ups and downs. It is these in which you are particularly interested.

You can study these ups and downs better if we adjust the index for trend—that is, if we compute the percentage that each one of the various values of the index is of the corresponding value of the trend. This has been done and the results are plotted in Fig. 2.

Now if you will look closely at Fig. 2, or at Fig. 1 for that matter, you will see that some of the peaks—or more exactly, areas of strength—come at more or less equal distances from each other. That is to say, the curve behaves as it would behave if there were some perfectly regular forces playing upon it—along with random forces—to force it alternately up and down. This tendency for strength at reasonably uniform time intervals—and of course with intervening weakness—is called *rhythm*.

The 10 Cycles

My study of 1944 showed ten rhythms, or cycles as they are often called, over 4 1/2 years in length, easily discoverable in the figures up to that date. These cycles are diagramed in Fig. 3. They have the following characteristics:

The 4.99-Year Cycle

Crests at 1861 and every 4 8/9 years forward and backward from that date. Typical strength, 3.5% above its trend at time of crest.

The 5.50-Year Cycle

Crests at 1864 and every 5 1/2 years forward and backward from that date. Typical strength, 7.0% above its trend at time of crest.

The 5.07-Year Cycle

Crests at 1905 and every 6 1/14 years

forward and backward from that date. Typical strength, 6.0% above its trend at time of crest.

The 6.86-Year Cycle

Crests at 1854 and every 6 6/7 years forward and backward from that date. Typical strength, 8.3% above its trend at time of crest.

The 8.17-Year Cycle

Crests at 1879 and every 8 1/6 years forward and backward from that date. Typical strength, 8.2% above its trend at time of crest.

The 9.2-Year Cycle

Crests at 1854 and every 9 1/5 years forward and backward from that date. Typical strength, 17.2% above its trend at time of crest.

The 11-Year Cycle

Crests at 1864 and every 11 years forward and backward from that date. Typical strength, 3.9% above its trend at time of crest.

The 12-Year Cycle

Crests at 1855 and every 12 years forward and backward from that date. Typical strength, 15.1% above its trend at time of crest.

The 14.5-Year Cycle

Crests at 1870 and every 14 1/2 years forward and backward from that date. Typical strength, 12.25% above its trend at time of crest.

The 21-Year Cycle

Crests at 1856 and every 21 years forward and backward from that date. Typical strength, 17.0% above its trend at time of crest.

When expressed in logarithms the typical waves of all rhythms seem to be zig-zag in shape, and symmetrical.

The Cycles Projected

Obviously these rhythms can be projected into the future as far as you like. Thus each one can be used not only to represent a portion of what has happened but a portion of what will happen, if the rhythm continues. Moreover, it is a matter of the simplest arithmetic to compute the combined effect of the rhythms, not only for the past but for the future also. This also is done for you in Fig. 3, and in Fig. 4.

How the Projection Worked Out

As you can see, the projection correctly forecast that the lull market, which had started in 1942, would continue through 1944 and 1945 to reach a peak in 1946. This happened. The projection then forecast that this peak would be followed by three years of decline to 1949. This also occurred. The projection then forecast a five year lull market, ending in 1954. * (See Fig. 5.)

At this writing (April 21, 1954), no one knows whether 1954 as a whole, in the combined index, will outtop 1953. Nor is it known whether or not an important decline will follow. However, up to and including the last of a series of imaginary transactions the record would have been as follows:

Year	Buy at	Sell and Short at	Cover at	Gain or Loss	% Gain or Loss
1944	99.8				
1946		139.0		40.1	40.2
1946		139.0			
1949			121.4	18.5	13.2
1952	121.4	187.7		66.3	54.6
1952		187.7			
1953			189.0	- 1.3	-.69
1953	189.0				
1954		?		?	?

As you can see, the percentage gains 1944 through 1953 were 156 times the percentage losses. Whether the purchase called for in 1953 and the sale called for in 1954, and the short sale called for 1954 and the cover called for in 1960 will also prove profitable, of course no one yet knows.

The levels were not forecast as accurately as the turning points. If we adjust the index to a gold basis, 1943 = 100, we get the comparison shown in Fig. 6, which is quite satisfactory. However, I am not

*THE FALTERING IN THE ADVANCE SHOWN FOR 1953 IN FIGS. 3, 5, AND 6 IS DUE TO A SMALL ARITHMETIC ERROR MADE IN 1944 AT THE TIME THESE 10 CYCLES WERE COMBINED. THE RESULTS MUST HOWEVER BE JUDGED ON THE FORECAST AS IT WAS ACTUALLY MADE AT THAT TIME. THIS HAS BEEN DONE. THE CORRECT VALUE FOR THE PROJECTION IS SHOWN IN FIG. 4.

at all sure that the upward surge of the past few years is due to inflation, although of course in part it may be.

Will the Top Come in 1954?

Will the crest predicted for 1954 come as forecast? Can you rely on this prediction?

Let us look at the pros and cons:

The arguments against reliance on 1954 as the turning point in the annual averages of the Standard and Poor's Corporation Combined Index are as follows:

1. Some of the observed cycles may have been present as a result of random forces rather than cyclic forces. Clearly, if cycles are present as a result of random forces they cannot be expected to continue.
2. Even significant cycles (that is to say cycles present as the result of cyclic forces) may, because of a compound nature, fade out in the course of time.
3. The projection being discussed did not include any cycles less than 4 1/2 years in length. There are without question shorter cycles in this series of figures. Their influence might advance or retard the crest from the time indicated by the longer cycles.
4. There may be other as yet undiscovered longer cycles in this series of figures. These additional longer cycles might also modify the time of the current crest.
5. It is unreasonable to imagine that all the ups and downs of the stock market are due to cyclic forces. Random factors undoubtedly play an important part. The forecast, by its very nature, cannot take these random factors into account.
6. In some instances the true cycle length may be a little longer or shorter than as determined. Also the amplitude may be a little greater or a little less. Note that errors of length are cumulative. An error of half a year in the length of a cycle will throw that particular cycle out two full years in four repetitions.
7. A comparison of the combination of all 10 cycles and trend with the actuals (Fig. 4 and Fig. 7.) show many divergencies. These divergencies are the result of random factors, shorter cycles, other longer cycles, incorrect cycle determination, etc. It is unreasonable to expect that there will not be divergencies in the

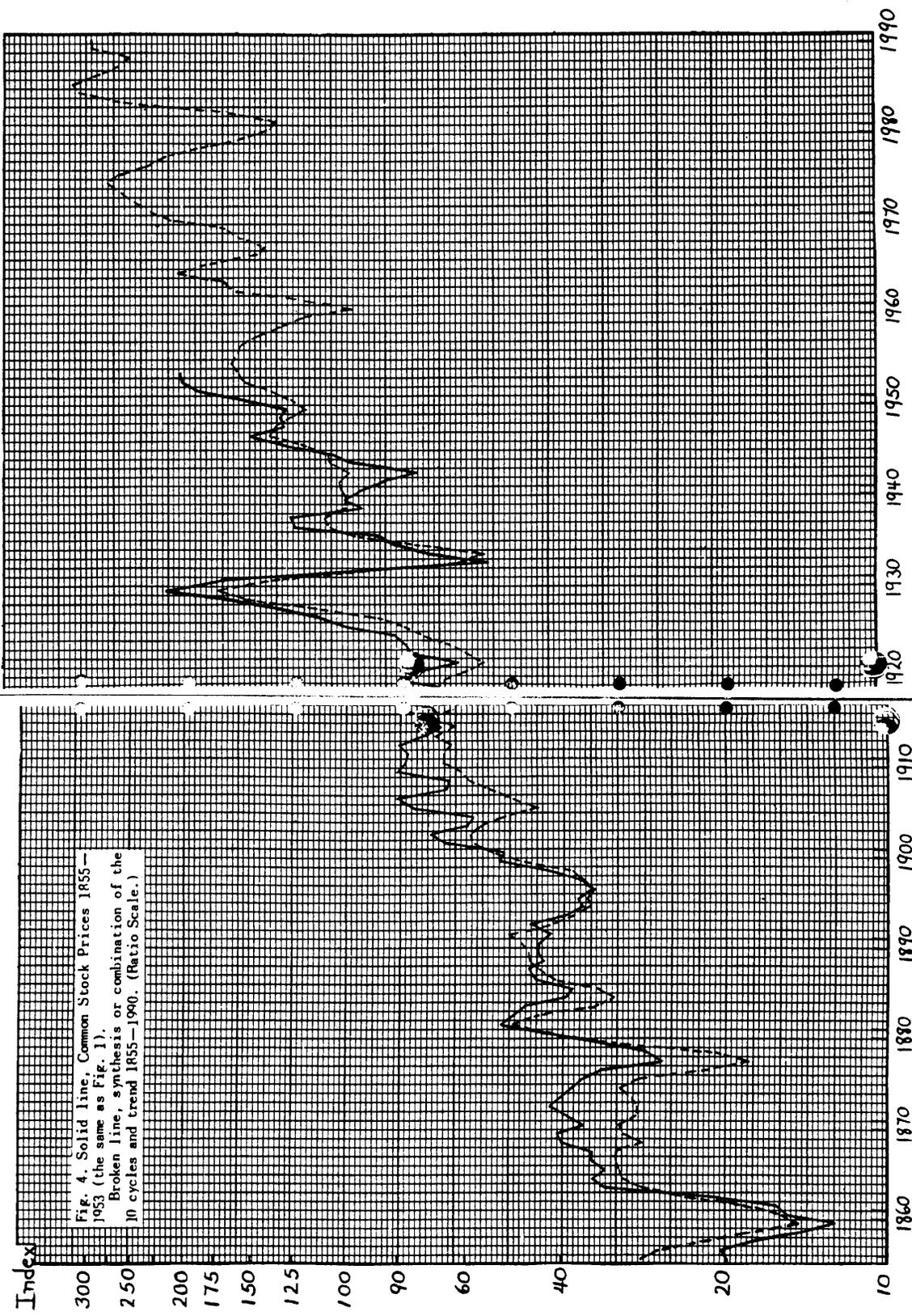


Fig. 4. Solid line, Common Stock Prices 1855-1953 (the same as Fig. 1).
 Broken line, synthesis or combination of the 10 cycles and trend 1855-1990. (Ratio Scale.)

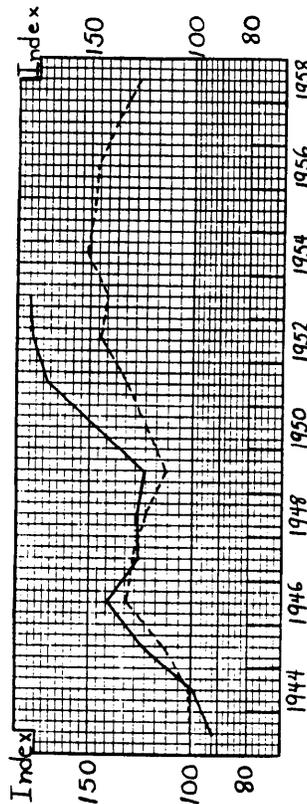


Fig. 5. Solid line 1943—1953, Standard and Poor's Corporation Combined Index (1935-39 = 100) as this index actually unfolded.
Broken line 1943—1958, a combination of the 10 cycles as determined in January 1944 and trend as determined in 1939. (Ratio Scale.)
Note that the combination of cycles and trend called for a peak in 1946, a trough in 1949, a faltering from 1952 to 1953, and a peak in 1954.

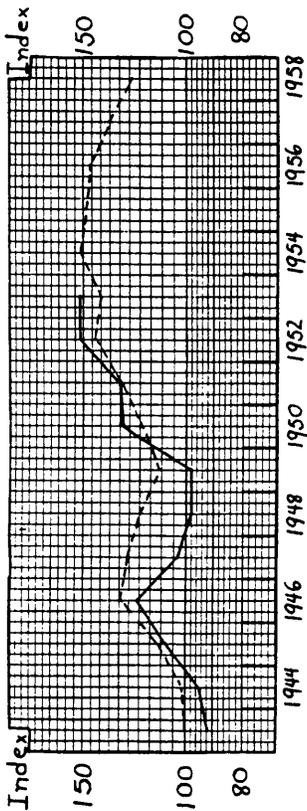


Fig. 6. Solid line 1943—1953, Standard and Poor's Corporation Combined Index (1935-39 = 100) converted to a gold basis 1943 = 100. This curve represents the prices of stocks in 1943 black market gold dollars.
Broken line 1943—1958, combination of the 10 cycles as determined in 1944 and trend as determined in 1939. This curve is the same as the broken line in Fig. 5. (Ratio Scale.)

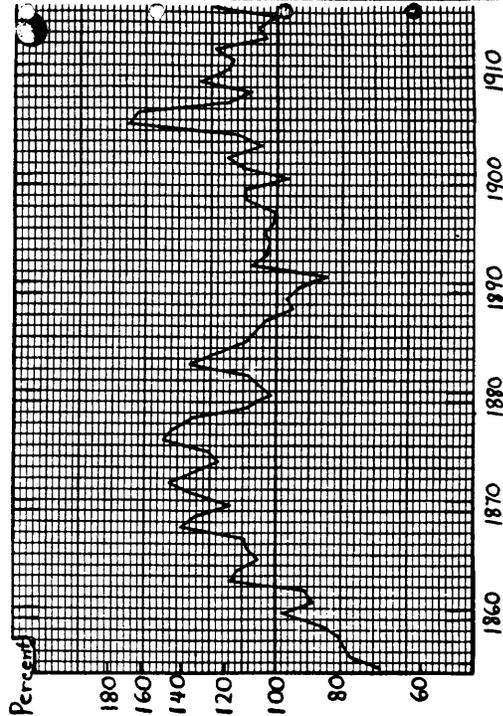
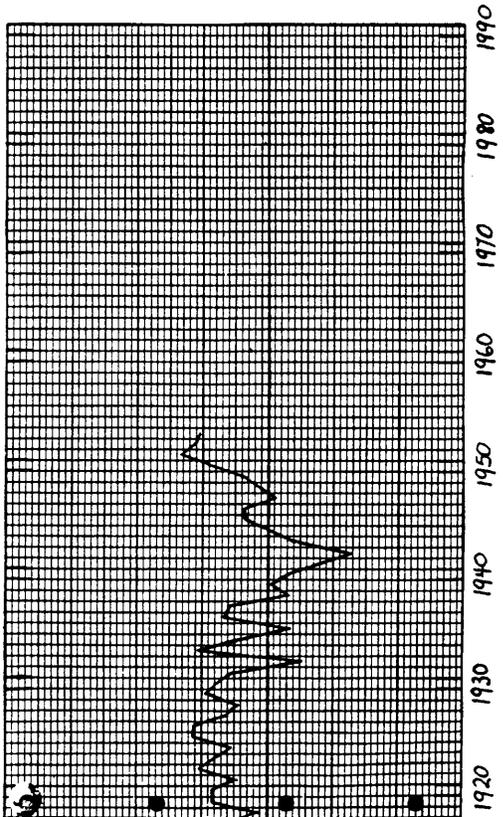


Fig. 7. The Remainder. The percentages that the actual stock market prices were, year by year, of the synthesis. (Ratio Scale.)



future.

8. Finally, it is the simplest of all mathematical tricks to reproduce any time series, such as Fig. 2, to any degree of accuracy you wish by combining enough perfectly regular cycles of well defined properties.

That is why in 1944, even though the combination of the ten cycles and trend (Fig. 4) fairly well correspond to the actual values I was not too impressed with the result. Neither was the New York financial house for which I did the work. I put it away and forgot all about it. Then one day, in 1951 I think, I happened to come across it. I compared the projection with actual behavior, from 1943 forward, with the result shown in Figs. 5 and 6. I was highly gratified.

The arguments in favor of reliance on this forecast are as follows:

1. Cycles do keep on operating after discovery. Cycle forecasts do come true. Remember Samuel Benner's pig iron price forecast which came true over a 60 year period with a gain-loss ratio of 45 to 1.

If the rhythms are significant they can be expected to continue. (Being "significant" means that they are the result of periodic forces, not the result of random forces which just happened to occur at rhythmic intervals.

2. The discovered cycles really were present in the figures 1854—1943. Moreover each of them repeated rhythmically over that period of time.

3. Many of the discovered cycles are well known and have been found over much longer periods of time in other series of figures.

4. Granted that the excellence of the comparison 1944—1953 is partly a matter of luck, it is impossible to believe that the general configuration of the two curves is all a matter of luck. The evidence suggests that at least some of the isolated cycles

must be continuing, and that the lengths and strengths and timing of these cycles must have been determined with pretty fair accuracy. That is, the amazing success over a 10 year period of the forecast made early in 1944 definitely suggest that the work has merit.

Conclusions

Let us now try to cast a balance:

The projection made in 1944, having worked for 10 years, cannot properly be ignored. This projection says in essence that we are at or near a peak, that 1954 is due to be a year of high, and that a substantial decline is due. This much I think we can and should accept.

The projection also tells us that after 1954 the chances of an important advance in the Standard and Poor's Corporation Combined Index are slim. I think we can accept this also as a statement of probability.

Finally, it is quite possible—even probable—that the forecast will continue to "work" and that a short sale of the Combined Index made at average prices for 1954 can later be covered at a profit, though I do not think the particular year of 1960, picked as the next year of low in 1944, 16 years in advance, is anything to bank on, nor do I take too much stock in the extent of the decline indicated.

As for 1954 being the year of crest, it would be surprising and a matter of pure luck if it should turn out so. You simply cannot ignore all cycles under 4 1/2 years and hope to hit the target on the button every time. By luck I did it twice. Do not count on my being able to do it again.

I think I can give you useful and valuable orientation. Do not abuse the results of my work by trying to make it do things it is not designed to do. Do use it within the limits of its usefulness, and profit!

E.R.D.

INDEX TO "CYCLES" VOLS. I-V
1950--1954

FOUNDATION FOR THE STUDY OF CYCLES
680 WEST END AVENUE
NEW YORK 25. NEW YORK

FOREWORD

THIS section reprints the cycle length indexes of the first five volumes of *Cycles*, a magazine published ten times a year by the Foundation for the Study of Cycles. It puts into compact form a list of all cycles that have been referred to in that magazine during the period 1950-1954.

In addition to the specific page references, the index is of use to the cycle student in four ways.

First, it enables an investigator to see what cycle lengths have been observed (and mentioned in *Cycles*).

Second, when a cycle is discovered, an investigator can see easily whether or not a cycle of the same length has been discovered by other workers in the same or in other phenomena (and mentioned in *Cycles*). If so he can see in how many and in what different phenomena it has been observed.

Third, by studying the nature of the different phenomena which are characterized by cycles of seemingly identical wave length, the cycle investigator may perhaps get some ideas in regard to the cause of cycles.

Fourth, by noting the different wave lengths which have been observed, it may be possible for some observing investigators to discover inter-relationships among the wave lengths themselves and thus to learn something of the laws which may be presumed to control behavior of this sort.

INDEX TO "CYCLES" VOLS. I-V

1950--1954

Volume I, 1950, Index by Cycle Length

LETTERS REFER TO MONTHS, J FOR JUNE, S FOR SEPTEMBER, O FOR OCTOBER, ETC.

- 24-HOUR OR DIURNAL CYCLE
 --IN THE BODY TEMPERATURE OF BIRDS, A) CATBIRD, B) EASTERN MOUSE WREN C) EASTERN ROBIN D) EASTERN WOOD PEWEE, O 14-15; D 23
- 14-DAY CYCLE
 --IN THE AMOROUSNESS OF WOMEN, S 15, 17
- 28-DAY CYCLE
 --IN THE AMOROUSNESS OF WOMEN, S 15, 17
 --IN THE ELECTRIC POTENTIAL OF TREES, N 17
- 29.5-DAY CYCLE
 --IN THE BIRTHS OF INFANTS, S 15, 17; D 23
 --IN FEMALE BIRTHS, S 17
 --IN MALE BIRTHS, S 17
 --IN SAP OF TROPICAL TREES, S 17
 --IN THUNDERSTORMS, S 17
- 4-MONTH CYCLE
 --IN THE ELECTRIC POTENTIAL OF TREES, N 15
- 6-MONTH CYCLE
 --IN THE ELECTRIC POTENTIAL OF TREES, N 15-16; D 23
- 9.18-MONTH CYCLE
 --IN THE TON-MILES OF THE CANADIAN PACIFIC RAILWAY, S 1; O 1
- 12-MONTH OR SEASONAL CYCLE
 --IN AMENDMENTS TO PATENTS, S 27
- 12-M. OR SEASONAL CYCLE CONTINUED
 --IN CIVIL SERVICE EXAMINATIONS IN MASSACHUSETTS, S 27
 --IN CIVIL SERVICE EXAMINATIONS IN NEW YORK CITY, S 27
 --IN CIVIL SERVICE EXAMINATIONS IN NEW YORK STATE, S 27
 --IN CRIME, O 4; D 23
 --IN THE FEDERAL RESERVE BOARD INDEX OF INDUSTRIAL PRODUCTION, J 16
 --IN HOMICIDES, O 16
 --IN INSANITY, O 4, 16, 17; D 23
 --IN MENTAL ACTIVITY, S 27
 --IN PARTICIPATION IN MEETINGS OF ENGINEERING SOCIETIES, S 28
 --IN PROSTITUTION, O 17
 --IN RAPE, O 17
 --IN SEXUAL OFFENSES, O 16, 17
 --IN SUICIDE, O 4, 16, 17; D 23
 --IN UNCHASTITY, O 17
- IN INTELLECTUAL INTEREST, S 27; D 23
 --IN LIBRARY CIRCULATION, S 28
 --IN MARKS OF STUDENTS AT WEST POINT, S 27
 --IN MARKS OF STUDENTS AT ANNAPOLIS, S 27
- 33-MONTH CYCLE
 --IN TON MILES OF THE CANADIAN PACIFIC RAILWAY, S 1; D 23
- 34 10/11-MONTH CYCLE
 --IN GENERAL BUSINESS, 1800-1832, N 12
- 36 6/11-MONTH CYCLE
 --IN GENERAL BUSINESS, 1832-1866, N 12
- 39 4/11-MONTH CYCLE
 --IN GENERAL BUSINESS, 1866-1902, N 12
- 40-MONTH CYCLE)
 40.8-MONTH CYCLE) (SEE ALSO 3-
 41-MONTH CYCLE) 3 1/2-YEAR CYCLE)
 --IN COMMON STOCK PRICES, J 12; S 11-14; D 5; D 23
 --IN FEDERAL RESERVE BOARD INDEX OF INDUSTRIAL PRODUCTION, J 16
 --IN GENERAL BUSINESS, N 3, 12-14, 34
- 3-3 1/2-YEAR CYCLE
 --IN GENERAL BUSINESS, CLEVELAND TRUST COMPANY INDEX, N 2, 4-14; D 23
- 6-YEAR CYCLE
 --IN ALLIS CHALMERS MFG., DOLLAR SALES BILLED, N 28; D 4, 11, 24
 --IN AMERICAN BUSINESS, O 3
 --IN AMERICAN VISCOSE CORP., SHIPMENTS IN POUNDS, N 28; D 4, 8, 24
 --IN ARMCO STEEL CORP., DOLLAR SALES, N 28; D 5, 15, 24
 --IN ARMOUR AND CO., DOLLAR SALES, N 28; D 4, 11, 24
 --IN AUTOMOBILE SALES, O 3, 5-9; D 23
 --IN BAROMETRIC PRESSURE, S 4; D 5, 6, 23
 --IN BETHLEHEM STEEL CO., PRODUCTION IN NET TONS, N 28; D 4, 8, 24
 --IN CIGARETTE PRODUCTION, O 21
 --IN CONTINENTAL OIL CO., GROSS OPERATING INCOME, N 28; D 5, 14, 24
 --IN COTTON PRICES, D 5, 7, 23
 --IN COTTON PRODUCTION,
- 6-YEAR CYCLE CONTINUED
 D 7, 23
 --IN E. I. DU PONT DE NEMOURS & CO., DOLLAR SALES TO CUSTOMERS, N 28; D 4, 8, 24
 --IN GENERAL BUSINESS, O 2-3
 --IN GENERAL ELECTRIC CO., ORDERS RECEIVED, IN DOLLARS, S 3-8, 24-25; N 28, 29; D 3, 4, 12, 23
 --IN B. F. GOODRICH CO., NET DOLLAR SALES, N 28; D 5, 15, 24
 --IN GOODYEAR TIRE & RUBBER CO., NET DOLLAR SALES, N 28; D 5, 16, 24
 --IN INLAND STEEL CO., NET DOLLAR SALES, N 28; D 4, 9, 24
 --IN JONES & LAUGHLIN STEEL CORP., TOTAL DOLLAR SALES, N 28; D 4, 9, 24
 --IN MONSANTO CHEMICAL CO., DOLLAR SALES, N 28; D 4, 10, 24
 --IN MONTGOMERY WARD & CO., NET DOLLAR SALES, N 28; D 4, 10, 24
 --IN NATIONAL LEAD CO., NET SALES, N 28; D 5, 14, 24
 --PI
 --IN PITTSBURGH PLATE GLASS CO., NET DOLLAR SALES, N 28; D 4, 10, 24
 --IN PROCTOR & GAMBLE CO., GROSS DOLLAR SALES, N 28; D 5, 16, 24
 --IN RAYON PRODUCTION, D 5, 7, 23
 --IN REPUBLIC STEEL CORP., INGOT PRODUCTION, NET TONS, N 28; D 4, 12, 24
 --IN SEABOARD AIR LINE, GROSS OPERATING REVENUE, N 28; D 3, 5, 16, 24
 --IN SEARS ROEBUCK & CO., NET SALES, N 28; D 4, 13, 24
 --IN STANDARD OIL OF CALIFORNIA, GROSS OPERATING INCOME, N 28; D 5, 17, 24
 --IN THE STOCK MARKET, D 4, 5, 23
 --IN SUNSPOT NUMBERS WITH ALTERNATE CYCLES REVERSED, J 11; S 4; D 4, 5, 6, 23
 --IN SWIFT & CO., DOLLAR SALES, N 28; D 5, 14, 24
 --IN TREE RINGS, D 4, 5, 6, 23
 --IN TWENTY-FIVE COMPANIES,

Volume I, 1950 Continued

- S 6; N 28
 --IN THIRTY DIFFERENT PHENOMENA, D 1
 --IN U. S. RUBBER CO., NET DOLLAR SALES, N 28; D 5, 17, 24
 --IN WILSON & CO., DOLLAR SALES, N 28; D 5, 14, 24
 --IN YOUNGSTOWN SHEET & TUBE CO., GROSS DOLLAR SALES, N 28; D 5, 13, 24
- 8-YEAR CYCLE
 --IN BAROMETRIC PRESSURE, D 6
 --IN CIGARETTE PRODUCTION, O 4, 18-22; D 23
 --IN GENERAL BUSINESS, O 3
- 9-YEAR CYCLE
 --IN GENERAL BUSINESS, O 2-3
 --IN NEW MEMBERS IN THE CONGREGATIONAL CHURCH, J 3
 --IN NEW MEMBERS IN THE EPISCOPAL CHURCH, J 3
 --IN NEW MEMBERS IN THE METHODIST CHURCH, J 3
 --IN NEW MEMBERS IN THE PRESBYTERIAN CHURCH IN THE U.S.A., J 3-8; D 23
 --IN STOCK MARKET PRICES, D 4, 5
- 9.6-YEAR CYCLE
 --IN THE ABUNDANCE OF LYNX, O 3, 10-13; D 23
 --IN RAINFALL IN UNITED PROVINCES, INDIA, D 23
- 11-YEAR CYCLE
 --IN BUSINESS, O 2
 --IN INTERNATIONAL BATTLES, N 2
 --IN SUNSPOT NUMBERS, J 8, 9
- 11, 12, OR 12½-YEAR CYCLE
 --IN BUSINESS, O 2
 --IN AUTOMOBILE SALES, O 3, 8
- 14½-YEAR CYCLE
 --IN THE NUMBER OF STRIKES, D 23
- 15-YEAR CYCLE
 --HYPOTHETICAL, D 18, 19, 20
- 16-YEAR CYCLE
 --HYPOTHETICAL, D 18, 20
- 17 2/3-YEAR CYCLE)
 17½-YEAR CYCLE)
 --IN LIABILITIES OF COMMERCIAL FAILURES, O 2; D 23
 --IN CONSTRUCTION, NOT PRESENT, J 2
 --IN PRICES, J 2
 --IN REAL ESTATE, NOT PRESENT, J 2
- 17 2/3-YEAR CYCLE) CONTINUED
 17 ¼-YEAR CYCLE)
 --IN SALES, J 2
 --IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED, S 10
 --IN TREE RINGS, D 23
- 18-YEAR CYCLE)
 18 1/5-YEAR CYCLE)
 18 1/3-YEAR CYCLE)
 --IN BUSINESS, O 2
 --IN BUILDING CONSTRUCTION, N 30
 --HYPOTHETICAL, D 19
 --IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED, S, INSIDE FRONT COVER 8-10; D 23
- 20-OR 21-YEAR CYCLE
 --IN THE ABUNDANCE OF LYNX, O 12
- 22-YEAR CYCLE)
 22 1/5-YEAR CYCLE)
 --IN POSTAL RECEIPTS IN MILWAUKEE, J 10
 --IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED, J 8-11; S 8, 9, 10; D 23
 --IN WHOLESALE PRICES, J 10; S 18; D 23
- 23-YEAR CYCLE
 --IN INTERNATIONAL BATTLES, N 1-2; D 2
- IN LEVELS OF LAKES & RIVERS, D 28
 --IN TREE RINGS, D 2, 27-32
 --IN VARVES OF GLACIAL AGE, D 28
 --IN WEATHER, D 28
- 35 OR 36-YEAR CYCLE
 --IN THE ABUNDANCE OF LYNX, O 12
- 36½-YEAR CYCLE
 --IN COTTON PRICES, N 17-19, 24, 25
- 41-YEAR CYCLE
 --IN COTTON PRICES, N 17-19, 24, 25, 26
- 46-YEAR CYCLE
 --DROUGHTS IN THE NORTHWEST, D 28, 32
 --IN LEVELS OF THE GREAT LAKES, D 28
 --IN TREE RING WIDTHS, D 29, 32
- 50-YEAR CYCLE)
 54-YEAR CYCLE)
 --IN PRODUCTION, O 2
 --IN TREE RINGS, D 23
 --IN WHOLESALE PRICES, S 18; O 2; N 30
- 52½-YEAR CYCLE
 --IN COTTON PRICES, N 17-19, 24, 25
- 57-YEAR CYCLE
 --IN COTTON PRICES, N 17-19, 24, 25
- 66½-YEAR CYCLE
 IN C
 --IN COTTON PRICES, N 17-19, 24, 25, 26
- 90-YEAR CYCLE
 --IN COTTON PRICES, N 17-19, 24, 25
- 92-YEAR CYCLE
 --IN TREE RING WIDTHS, D 29

Volume II, 1951, Index by Cycle Length

- 12½-HOUR CYCLE
 --OF THE TIDES, 241
- DAILY CYCLE
 --THE COTTON HAIR, 168
 --THE HEN IN NORWAY, 48
- 29½-DAY CYCLE
 --IN THE BIRTHS OF INFANTS, 135
- 2.89-MONTH CYCLE
 --IN THE SIDEREAL PERIOD OF MERCURY, 135
 --IN THE SYNODIC PERIOD OF MERCURY AND PLUTO, 137
- 2.90-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF MERCURY AND NEPTUNE, 137
 --IN THE SYNODIC PERIOD OF MERCURY AND URANUS, 137
- 2.91-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF MERCURY AND SATURN, 137
- 2.95-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF MERCURY AND JUPITER, 137
- 2.975-MONTH CYCLE
 --IN COMMON STOCK PRICES, 88
- 3.31-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF MERCURY AND MARS, 137
- 3.81-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF MERCURY AND EARTH, 136, 137
- 4.05-MONTH CYCLE
 --IN THE SALES OF COMPANY G, 130
- 4.75-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF MERCURY AND VENUS, 136, 137
- 7.38-MONTH CYCLE
 --IN THE SIDEREAL PERIOD OF VENUS, 135
- 7.4-MONTH CYCLE
 --IN THE SALES OF COMPANY G, 130, 132
 --IN THE SYNODIC PERIOD OF VENUS AND PLUTO, 137
- 7.41-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF VENUS AND NEPTUNE, 137
- 7.44-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF VENUS AND URANUS, 137
- 7.54-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF VENUS AND SATURN, 137
- 7.58-MONTH (33-WEEK) CYCLE
 --IN DEATHS FROM INFLUENZA, 89
- 7.79-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF VENUS AND JUPITER, 137
- 7.92-MONTH CYCLE
 --IN THE SALES OF COMPANY G, 130
- 8.00-MONTH CYCLE
 --IN COMMON STOCK PRICES, 88
- 8.80-MONTH CYCLE
 --IN COMMON STOCK PRICES, 88
- 9.18-MONTH CYCLE
 --IN TON MILES OF THE CANADIAN PACIFIC RAILWAY, 208, 209, 215
- 9.36-MONTH CYCLE
 --IN THE SALES OF COMPANY G, 130
- 9.43-MONTH (41-WEEK) CYCLE
 --IN DEATHS FROM INFLUENZA, 89
- 9.87-MONTH CYCLE
 --IN THE SALES OF COMPANY G, 130
- 10.95-MONTH CYCLE
 --IN COMMON STOCK PRICES, 88
- 10.97-MONTH CYCLE
 --IN THE SYNODIC PERIOD OF VENUS AND MARS, 137
- 11.52-MONTH CYCLE
 --IN THE SALES OF COMPANY G, 130
- 12.0-MONTH (SEASONAL) CYCLE
 --IN INTELLECTUAL INTEREST, 7
 --IN RESIDENTIAL BUILDING CONSTRUCTION, 174, 182
 --IN THE SALES OF COMPANY G, 130
 --IN THE SIDEREAL PERIOD OF EARTH, 135
 --IN TEMPERATURE, 241

Volume II, 1951 Continued

- 12.05-MONTH CYCLE
--IN THE SYNODIC PERIOD OF EARTH AND PLUTO, 136, 137
- 12.07-MONTH CYCLE
--IN THE SYNODIC PERIOD OF EARTH AND NEPTUNE, 136, 137
- 12.14-MONTH CYCLE
--IN THE SYNODIC PERIOD OF EARTH AND URANUS, 136, 137
- 12.42-MONTH CYCLE
--IN THE SYNODIC PERIOD OF EARTH AND SATURN, 136, 137
- 12.57-MONTH CYCLE
--IN THE SALES OF COMPANY G, 130
- 13.10-MONTH CYCLE
--IN THE SYNODIC PERIOD OF EARTH AND JUPITER, 136, 137
- 14.04-MONTH CYCLE
--IN THE SALES OF COMPANY G, 130
- 14.40-MONTH CYCLE
--IN COMMON STOCK PRICES, 88
- 15.0-MONTH CYCLE
--HYPOTHETICAL, 232, 375
--IN THE SALES OF COMPANY G, 130
- 16.0-MONTH CYCLE
--HYPOTHETICAL, 375
- 17.17-MONTH CYCLE
--IN COMMON STOCK PRICES, 88
- 18.0-MONTH CYCLE
--HYPOTHETICAL, 232
--IN THE PRICES OF MALLEABLE IRON PIPE FITTINGS, 379
- 18.17-MONTH CYCLE
--IN COMMON STOCK PRICES, 88
- 18.67-MONTH CYCLE
--IN THE SALES OF COMPANY G, 130
- 19.18-MONTH CYCLE
--IN THE SYNODIC PERIOD OF VENUS AND EARTH, 136, 137
- 20.0-MONTH CYCLE
--HYPOTHETICAL, 232
--IN THE SALES OF COMPANY G, 130
- 21.0-MONTH CYCLE
--IN THE PRICES OF MALLEABLE IRON PIPE FITTINGS, 362-6, 379
- 22.57-MONTH CYCLE
--IN THE SIDEREAL PERIOD OF MARS, 135
- 22.7-MONTH CYCLE
--IN THE SALES OF COMPANY G, 10, 11, 13, 51, 130, 134-5
--IN THE SYNODIC PERIOD OF MARS AND PLUTO, 137
- 22.8-MONTH CYCLE
--IN THE SYNODIC PERIOD OF MARS AND NEPTUNE, 137
- 23.1-MONTH CYCLE
--IN THE SYNODIC PERIOD OF MARS AND URANUS, 137
- 24-TO 36-MONTH (2-TO 3-YEAR) CYCLE
--IN INFLUENZA A, 89, 90
- 24.1-MONTH CYCLE
--IN THE SYNODIC PERIOD OF MARS AND SATURN, 137
- 24.25-MONTH CYCLE
--IN COMMON STOCK PRICES, 88
- 25.62-MONTH CYCLE
--IN THE SYNODIC PERIOD OF EARTH AND MARS, 136, 137
- 26.82-MONTH CYCLE
--IN THE SYNODIC PERIOD OF MARS AND JUPITER, 137
- 27.7-MONTH CYCLE
--IN THE SALES OF COMPANY G, 130
- 29.28-MONTH CYCLE
--IN COMMON STOCK PRICES, 88
- 30.0-MONTH CYCLE
--IN THE PRICES OF MALLEABLE IRON PIPE FITTINGS, 362-6, 378
- 30.62-MONTH CYCLE
--IN THE SALES OF COMPANY G, 130
- 31.0-MONTH (2.58-YEAR) CYCLE
--IN COMMON STOCK PRICES, 88, 283
- 32.85-MONTH CYCLE
33.00-MONTH CYCLE
--IN C.P.R. TON MILES, 49, 52
--IN COMMON STOCK PRICES, 283
--FIRST DISCOVERED IN 1935, 45
--IN RESIDENTIAL BUILDING, 49, 138-9, 171
--IN THE SALES OF COMPANY G, 49-51, 130, 132, 134
- 35.5-MONTH (2.96-YEAR) CYCLE
--IN COMMON STOCK PRICES, 88, 283
- 3-TO 4-YEAR (36-TO 48-MONTH) CYCLE
--OF INFLUENZA IN AUSTRALIA, 90
- 3-YEAR (36-MONTH) CYCLE
--IN COMMON STOCK PRICES, 83
--IN DEATHS FROM INFLUENZA, 89
--IN THE SUN, 352
- 3.15-YEAR (37.75-MONTH) CYCLE
--IN THE SALES OF COMPANY G, 130
- 3.25-YEAR (39-MONTH)
3.33-YEAR (40-MONTH) CYCLE
3.42-YEAR (41-MONTH)
--IN MONTHLY COMMERCIAL PAPER RATES IN NEW YORK, 330
(FOR 40- & 41-MONTH CYCLES SEE BELOW ALSO)
- 3.33-YEAR (40-MONTH) CYCLE
--IN CLEARINGS IN GREAT BRITAIN, 330
--IN CLEARINGS IN THE UNITED STATES, 330
--IN COMMODITY PRICES IN GREAT BRITAIN, 330
--IN COMMODITY PRICES IN THE UNITED STATES, 330
--HYPOTHETICAL, 230
--IN INTEREST RATES IN GREAT BRITAIN, 330
--IN INTEREST RATES IN THE UNITED STATES, 330
(FOR 40-MONTH CYCLE SEE ABOVE ALSO)
- 3.38-YEAR (40.56-MONTH)
3.39- " (40.88- ")
3.40- " (40.80- ") CYCLE
3.42- " (41.00- ")
--IN COMMON STOCK PRICES, 88, 283-4, 371, 376
--IN INDUSTRIAL COMMON STOCK PRICES, 327, 328, 330, 332, 334-5, 345
--IN THE PRICES OF MALLEABLE IRON PIPE FITTINGS, 362-66, 378
--IN RAILROAD STOCK PRICES, 377
--IN THE SALES OF COMPANY G, 130
(FOR 41-MONTH CYCLE SEE ABOVE ALSO)
- 3.50-YEAR (42-MONTH) CYCLE
--HYPOTHETICAL, 230
- 3.67-YEAR (44.0-MONTH) CYCLE
--IN THE PRICES OF MALLEABLE IRON PIPE FITTINGS, 362-6, 379
--IN THE SALES OF COMPANY G, 130
- 3.79-YEAR (45.48-MONTH) CYCLE
--IN COMMON STOCK PRICES, 88, 283
- 4-YEAR (48-MONTH) CYCLE
--IN ABUNDANCE OF MICE, 391
--IN COMMON STOCK PRICES, 178
- 4-TO 6-YEAR (48-TO 72-MONTH) CYCLE
--IN INFLUENZA B, 89, 90
- 4.375-YEAR (52.5-MONTH) CYCLE
--IN THE SALES OF COMPANY G, 130
- 4.78-YEAR (57.36-MONTH) CYCLE
--IN COMMON STOCK PRICES, 250
- 4.88-YEAR (58.56-MONTH) CYCLE
--IN COMMON STOCK PRICES, 283
- 4.89-YEAR (58.68-MONTH) CYCLE
--IN COMMON STOCK PRICES, 88, 244, 246, 248-50, 261-3, 283, 330-1
- 5.10-YEAR (61.2-MONTH) CYCLE
--IN THE SALES OF COMPANY G, 130
- 5.50-YEAR (66.00-MONTH) CYCLE
--IN COMMON STOCK PRICES, 88, 246, 248, 249, 262-3, 283, 330-1
--IN CORN PRICES, 252
--FIRST DISCOVERED IN 1872, 252
- 5.75-YEAR (69.00-MONTH) CYCLE
--FALSE, IN COMMON STOCK PRICES, 331
- 5.91-YEAR (70.92-MONTH) CYCLE
--IN COTTON PRICES, 353
--IN SUNSPOTS, 353
- 6.00-YEAR (72-MONTH) CYCLE
--IN COMMON STOCK PRICES, 283-4
--IN THE SALES OF COMPANY G, 130
--IN THE SUN, 352
- 6.07-YEAR CYCLE
--IN COMMON STOCK PRICES, 88, 246, 248, 249-51, 263, 283-4, 330-1
- 6.11-YEAR CYCLE
--IN COTTON PRICES, 353
--IN SUNSPOTS, 353
- 6.50-YEAR CYCLE
--IN ABUNDANCE OF BRITISH GROUSE, 47
- 6.86-YEAR CYCLE
--IN COMMON STOCK PRICES, 88, 246, 248, 263, 283
- 7.22-YEAR CYCLE
--IN COMMON STOCK PRICES, 283
- 7.70-YEAR CYCLE
--IN COMMON STOCK PRICES, 283
- 8-YEAR CYCLE
--IN THE SALES OF COMPANY G, 130
- 8.17-YEAR CYCLE
--IN COMMON STOCK PRICES, 88, 246, 248, 263, 283
- 8.50-YEAR CYCLE
--IN COMMON STOCK PRICES, 283
- 8.85-YEAR CYCLE
--IN PREGLACIAL TREES, 48
- 9-YEAR CYCLE
--FIRST DISCOVERED ABOUT 1870, 251
--IN CHURCH MEMBERSHIP, 164, 161-2
--IN PIG IRON PRICES, 251
- 9.20-YEAR CYCLE
--IN COMMON STOCK PRICES, 88, 220, 243, 245-8, 250-1, 263, 266, 283-4, 371
--IN INDUSTRIAL COMMON STOCK PRICES, 204-7, 233, 266, 328, 334, 345
--IN RAILROAD COMMON STOCK PRICES SINCE 1831, 266
- 9.6-YEAR CYCLE
--IN THE ABUNDANCE OF THE VARYING HARE (SNOWSHOE RABBIT), 391
--IN THE ACREAGE OF WHEAT, 175, 182

Volume II, 1951 Continued

10-YEAR CYCLE

- AFFECTING WESTERN CANADIAN ANIMALS, 48
- IN ABUNDANCE OF CROSS FOX, 48
- IN ABUNDANCE OF FISCHER, 48
- IN ABUNDANCE OF HAWK OWL, 48
- IN ABUNDANCE OF LYNX, 48
- IN ABUNDANCE OF MARTIN, 48
- IN ABUNDANCE OF MUSKRAT, 48
- IN ABUNDANCE OF RED FOX, 48
- IN ABUNDANCE OF SILVER FOX, 48
- IN ABUNDANCE OF SNOWSHOE RABBIT, 47, 48
- IN ABUNDANCE OF WISCONSIN GROUSE, 47
- IN ABUNDANCE OF WOLF, 48
- IN COMMON STOCK PRICES, 283
- IN GRASSHOPPER OUTBREAKS, 336, 391
- NONE FOR ANY MIGRATORY BIRD EXCEPT THE HAWK AND THE OWL, 48
- NOT PRESENT SIMULTANEOUSLY IN VARIOUS PARTS OF CANADA, 48
- VARIOUS CYCLES TIED UP TOGETHER, 48
- 10.65-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
- 11.00-YEAR) CYCLE
- 11.14-YEAR) CYCLE
 - IN COMMON STOCK PRICES, 88, 246, 248, 252, 263, 283
 - IN COPPER PRICES, 353
 - IN INTERNATIONAL CONFLICT, 12, 45-6
 - IN SUNSPOTS, 280, 344, 346, 353
 - WELL KNOWN IN THE AURORA, 367
- 11.86-YEAR CYCLE
 - IN THE SIDEREAL PERIOD OF JUPITER, 135
- 12.0-YEAR CYCLE
 - IN ABUNDANCE OF NUM MOTH, 169
 - IN ABUNDANCE OF PINE MOTH, 169
 - IN ABUNDANCE OF PINE SAWFLY, 169
 - IN COMMON STOCK PRICES, 88, 246, 248, 252, 263, 283-4
- 12.46-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF JUPITER AND PLUTO, 137
- 12.50-YEAR CYCLE
 - IN COMMON STOCK PRICES, 252
 - IN THE SALES OF COMPANY G, 133
- 12.78-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF JUPITER AND NEPTUNE, 137
- 13.50-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
- 13.81-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF JUPITER AND URANUS, 137
- 14.50-YEAR CYCLE
 - IN COMMON STOCK PRICES, 88, 246, 248, 263, 283
- 15-YEAR CYCLE
 - IN CATTLE PRICES, 353
 - IN PEPPER PRICES, 353, 391
- 16-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
- 17-YEAR CYCLE
 - IN RAILROAD STOCK PRICES, 260

17.75-YEAR CYCLE

- IN BUSINESS FAILURES, 359
- IN COTTON PRICES, 353
- IN SUNSPOTS, 353
- IN TREE RINGS, 353, 359
- 18.0-YEAR)
- 18.2-YEAR) CYCLE
- 18.3-YEAR)
- IN COMMON STOCK PRICES, 251, 260, 283
- IN INTERNATIONAL WARS, 54
- IN RESIDENTIAL BUILDING CONSTRUCTION, 171, 180, 225-6
- IN THE SALES OF COMPANY G, 133
- IN SUNSPOTS, 346, 353
- 19.0-YEAR CYCLE
 - THE METONIC CYCLE, 228
- 19.4-YEAR) CYCLE
- 19.5-YEAR) CYCLE
 - IN COMMON STOCK PRICES, 283-4
 - IN INDUSTRIAL COMMON STOCK PRICES, NOT YET ISOLATED, 334
 - IN RAILROAD STOCK PRICES, 243, 245, 255, 258, 260, 263
- 19.86-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF JUPITER AND SATURN, 137
- 21.0-YEAR CYCLE
 - IN COMMON STOCK PRICES, 88, 246, 248, 252, 263, 283
- 21.75-YEAR CYCLE
 - IN COTTON PRICES, 140, 142
- 22.00-YEAR)
- 22.14- ")
- 22.20- ") CYCLE
- 22.25- ")
- 23.00- ")
- IN THE CHARLES H. PINKHAM INDEX OF ADVERTISING EFFICIENCY, 234
- IN INTERNATIONAL CONFLICT, 6, 12, 43-6, 53-4, 162, 223
- MAY BE IN COMMON STOCK PRICES, 252
- IN RAILROAD STOCK PRICES, 258, 260
- IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED, 43, 344, 346, 352
- WELL KNOWN, 141
- 23.25-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
- 27.75-YEAR CYCLE
 - IN COTTON PRICES, 140, 142
- 29.46-YEAR CYCLE
 - IN THE SIDEREAL PERIOD OF SATURN, 135
- 30-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
- 33.43-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF SATURN AND PLUTO, 137
- 33.75-YEAR CYCLE
 - IN COTTON PRICES, 140, 141, 142
- 34-YEAR CYCLE
 - AFFECTING WESTERN ANIMALS, 48
- 35.87-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF SATURN AND NEPTUNE, 137, 368
- 35.9-YEAR CYCLE
 - IN AURORA BOREALIS, 368-9

37-YEAR CYCLE

- IN THE ABUNDANCE OF LYNX (SINCE 1735), 277-8
- IN COMMON STOCK PRICES (SINCE 1831), 277-8
 - (A) IN RAILROAD STOCK PRICES (SINCE 1831), 277-8
 - (B) IN INDUSTRIAL STOCK PRICES (SINCE 1871), 277-8, 284
- IN COTTON PRICES (SINCE 1731-32), 277-8
- IN THE FLOODS OF THE RIVER NILE (SINCE 622), 277-8
- IN THE FREQUENCY OF THE AURORA BOREALIS (SINCE 385 A.D.), 277-8, 367-70
- IN THE FREQUENCY OF CHINESE EARTHQUAKES (SINCE 200 A.D.), 277-8
- IN THE FREQUENCY OF SEVERE WINTERS IN EUROPE (SINCE 330 A.D.), 277-8
- GENERAL, 276
- IN THE GROWTH OF ARIZONA PINES (SINCE 1460), 277-8
- IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED (SINCE 1749), 277-8, 341-2, 344, 346-8
- IN TEMPERATURE AT NEW HAVEN (SINCE 1781), 277-8
- IN THE VARIATION IN THE LENGTH OF TIME BETWEEN SUNSPOT MAXIMA (SINCE 301 A.D.), 277-9
- IN WHEAT PRICES (SINCE 1265), 277-8
- 37.50-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
 - IN SUNSPOTS, 280-2
- 45.36-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF SATURN AND URANUS, 137
- 51.50-YEAR CYCLE
 - IN COMMON STOCK PRICES, 283
- 57-YEAR CYCLE
 - IN INTERNATIONAL CONFLICT, 4-6, 12, 45
- 84.01-YEAR CYCLE
 - IN THE SIDEREAL PERIOD OF URANUS, 135
- 127.1-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF URANUS AND PLUTO, 137
- 164.78-YEAR CYCLE
 - IN THE SIDEREAL PERIOD OF NEPTUNE, 135
- 171.4-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF URANUS AND NEPTUNE, 137
- 248.42-YEAR CYCLE
 - IN THE SIDEREAL PERIOD OF PLUTO, 135
- 300-YEAR CYCLE
 - IN SUNSPOTS, 281-2
- 492-YEAR CYCLE
 - IN THE SYNODIC PERIOD OF NEPTUNE AND PLUTO, 137
- 700-YEAR CYCLE
 - IN AURORA BOREALIS IN JAPAN AND IN KOREA, 339
 - IN JAPANESE CLIMATE, 337-40
 - IN TREE RINGS IN JAPAN AND IN FORMOSA, 337, 340
- 220,000,000-YEAR CYCLE
 - IN THE WHOLE GALAXY, 135

Volume III, 1952, Index by Cycle Length

- 14-DAY CYCLE
 - IN AMOROUSNESS OF WOMEN, 181-3
- 28-DAY CYCLE
 - IN WOMEN'S TEMPERATURE, 24
- 35-DAY CYCLE
 - IN EMOTIONS OF MALE WORKERS, 16
- 5.1-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 5.3-MONTH CYCLE
 - INDUSTRIAL COMMON STOCK PRICES, 174-8
- 5.6-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 5.8-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 176-8
- 5.9-MONTH) CYCLE
- 6.0-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 6.3-MONTH) CYCLE
- 6.4-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 6.5-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 174, 175, 178
- 6.7-MONTH) CYCLE
- 6.8-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 7.5-MONTH) CYCLE
- 7.6-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 7.8-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 174, 175, 178
- 8-MONTH (.667-YEAR)) CYCLE
- 8.1-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
 - IN STOCK PRICES, 239
- 8.16-MONTH (.660-YEAR) CYCLE
 - THEORETICAL, 239
- 8.2-MONTH CYCLE
 - IN RAILROAD STOCK PRICES, 197-9
- 8.3-MONTH) CYCLE
- 8.5-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 8.89-MONTH (.733-YEAR) CYCLE
 - IN STOCK PRICES, 239
- 8.82-MONTH (.735-YEAR) CYCLE
 - THEORETICAL, 239
- 9.2-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 174-8
- 9.3-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 176-8
- 9.9-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 176-8
- 10.2-MONTH)
- 10.3-MONTH) CYCLE
- 10.5-MONTH) CYCLE
- 10.6-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168, 169, 172-8
- 10.7-MONTH)
- 10.8-MONTH) CYCLE
- 10.9-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 172-8
- 10 96-MONTH (.913-YEAR) CYCLE
 - IN STOCK PRICES, 239
- 11-MONTH CYCLE
 - IN CHINESE EARTHQUAKES, 15
- 11.09-MONTH (.924-YEAR) CYCLE
 - THEORETICAL, 239
- 11.1-MONTH) CYCLE
- 11.2-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168, 169, 172-5, 178
- 11.4-MONTH)
- 11.5-MONTH) CYCLE
- 11.6-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-71, 174-8
- 11.9-MONTH)
- 12-MONTH) CYCLE
- 12.1-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-73, 176-78
- 12.5-MONTH) CYCLE
- 12.6-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-71, 178
 - IN THE SALES OF COMPANY G, 94-96, 99-109
- 12.8-MONTH) CYCLE
- 12.9-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 170-3, 178
- 13.1-MONTH)
- 13.2-MONTH) CYCLE
- 13.3-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-71, 174-8
- 13.6-MONTH)
- 13.7-MONTH) CYCLE
- 13.8-MONTH)
- 13.9-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-73, 178
- 14.4-MONTH) CYCLE
- 14.5-MONTH (1.20-YEAR)) CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-73, 178
 - IN STOCK PRICES, 239
- 14.47-MONTH (1.206-YEAR) CYCLE
 - THEORETICAL, 239
- 14.6-MONTH)
- 14.7-MONTH) CYCLE
- 14.9-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-73, 178
- 15-MONTH CYCLE
 - IN STOCK PRICES, 268
- 15.3-MONTH) CYCLE
- 15.5-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168, 169, 172, 173, 178, 270
- 16.4-MONTH) CYCLE
- 16.8-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-71, 178
- 17.3-MONTH) CYCLE
- 17.8-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-9, 172-3, 178
- 17.64-MONTH (1.47-YEAR) CYCLE
 - IN STOCK PRICES, 239
- 18.3-MONTH) CYCLE
- 18.7-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-73, 178
- 18.34-MONTH (1.528-YEAR)
 - THEORETICAL, 239
- 19-MONTH CYCLE
 - IN THE ADVERTISING EFFECTIVENESS OF THE PINKHAM
- MEDICINE COMPANY, 30, 32
- 19.6-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-71, 178
- 21.6-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-9, 178
- 22.2-MONTH) CYCLE
- 22.7-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 170-3, 178
- 23-MONTH CYCLE
 - IN COMMON STOCK PRICES, 270, 288, 297
- 23.2-MONTH) CYCLE
- 23.7-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-73, 178
- 24.3-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 172-3, 178
- 24.24-MONTH (2.02-YEAR) CYCLE
 - IN STOCK PRICES, 239
- 24.48-MONTH (2.040-YEAR) CYCLE
 - THEORETICAL, 239
- 24.9-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 170-3, 178
- 25.8-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-9, 178
- 27.8-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 170-1, 178
- 28.6-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-9, 178
- 29.1-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 172-3, 178
- 29.64-MONTH (2.470-YEAR) CYCLE
 - THEORETICAL, 239
- 30.2-MONTH) CYCLE
- 30.5-MONTH)
 - IN INDUSTRIAL COMMON STOCK PRICES, 170-3, 178
- 30.12-MONTH (2.51-YEAR) CYCLE
 - STOCK PRICES, 239
- 31.2-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168-9, 178
- 32.64-MONTH (2.72-YEAR) CYCLE
- 32.85-MONTH (2.74-YEAR) CYCLE
- 33 -MONTH (2.75-YEAR)
 - IN RESIDENTIAL BUILDING CONSTRUCTION, 211, 364
 - IN SALES OF COMPANY G, 242-3
 - IN STOCK PRICES, 239
 - THEORETICAL, 239
- 34.2-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 170-3, 178
- 35.27-MONTH (1.939-YEAR) CYCLE
 - THEORETICAL, 239
- 35.4-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 233-5
- 35.6-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168, 169, 178
- 35 76-MONTH (2.98-YEAR) CYCLE
 - IN STOCK PRICES, 239
- 3-YEAR (36-MONTH) CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 233-5
- 3.02-YEAR (36.2-MONTH) CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 172, 173, 178
- 3.25-YEAR (39-MONTH) CYCLE

Volume III, 1952 Continued

- IN INDUSTRIAL COMMON STOCK PRICES, 172, 173, 178
- 33-YEAR (40-MONTH) CYCLE
- IN PIG IRON PRICES, 277
- 40-YEAR (40.80-MONTH) CYCLE
- IN STOCK PRICES, 239
- 42-YEAR (41-MONTH) CYCLE
- IN ATMOSPHERIC ELECTRICITY, 130
- IN INDUSTRIAL COMMON STOCK PRICES, 42, 44, 45, 49, 233, 297
- IN RAILROAD STOCK PRICES, 197-9
- IN STOCK PRICES, 130, 149, 152, 287
- IN U.S. ECONOMIC PHENOMENA, DISCOVERY OF, 152
- 450-YEAR (41.40-MONTH) CYCLE
- THEORETICAL, 239
- 47-YEAR (41.6-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 168-71, 178
- 58-YEAR (43-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 172, 173, 178
- 700-YEAR (44.40-MONTH) CYCLE
- THEORETICAL, 239
- 79-YEAR (45.48-MONTH) CYCLE
- IN STOCK PRICES, 239
- 8-YEAR (45.60-MONTH) CYCLE
- IN STOCK PRICES, 129
- 83-YEAR (46-MONTH)
- 88-YEAR (46.6-MONTH)
- 89-YEAR (46.7-MONTH)
- 9-YEAR (47-MONTH)
- IN INDUSTRIAL COMMON STOCK PRICES, 166-7, 172-3, 178
- IN RAILROAD STOCK PRICES, 126-9, 178
- IN STOCK PRICES, 265-70, 287-8, 297
- YEAR (48-MONTH) CYCLE
- IN STOCK PRICES, 239
- 05-YEAR (48.6-MONTH)) CYCLE
- 08-YEAR (49-MONTH)) CYCLE
- IN ADVERTISING EFFECTIVENESS OF PINKHAM MEDICINE COMPANY, 30, 32
- IN RAILROAD STOCK PRICES, 126-9, 178
- IN PIG IRON PRICES, 207-9
- 1-YEAR (49.2-MONTH) CYCLE
- IN PIG IRON PRICES, 207-9
- 2-YEAR (50.40-MONTH) CYCLE
- INDUSTRIAL COMMON STOCK PRICES, 166-9
- IN PIG IRON PRICES, 207-9
- 38-YEAR (52.6-MONTH) CYCLE
- IN STOCK PRICES, 297
- 4-YEAR (52.80-MONTH)) CYCLE
- 42-YEAR (53-MONTH)) CYCLE
- IN ADVERTISING EFFECTIVENESS OF PINKHAM MEDICINE COMPANY, 30, 32
- IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5-YEAR (54-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 591-YEAR (55.09-MONTH) CYCLE
- THEORETICAL, 239
- 5-YEAR (55.20-MONTH) CYCLE
- IN RAILROAD STOCK PRICES, 126-9, 178
- 4.7-YEAR (56.40-MONTH) CYCLE
- IN PIG IRON PRICES, 207-9,
- 4.78-YEAR (57.36-MONTH) CYCLE
- IN STOCK PRICES, 239
- 4.8-YEAR (57.60-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 170, 171, 178
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 4.830-YEAR (57.96-MONTH) CYCLE
- THEORETICAL, 239
- 4.88-YEAR (58.56-MONTH))
- 4.90-YEAR (58.89-MONTH)) CYCLE
- 4.92-YEAR (59-MONTH))
- IN ADVERTISING EFFECTIVENESS OF THE PINKHAM MEDICINE COMPANY, 30, 32
- IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- IN RAILROAD STOCK PRICES, 126-9
- IN STOCK PRICES, 129, 239
- 5-YEAR (60-MONTH) CYCLE
- IN PIG IRON PRICES, 297,9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5.1-YEAR (61.20-MONTH) CYCLE
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5.3-YEAR (63.60-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5.4-YEAR (64.80-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5.5-YEAR (66-MONTH) CYCLE
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5.6-YEAR (67-MONTH) CYCLE
- IN ADVERTISING EFFECTIVENESS OF PINKHAM MEDICINE Co, 30, 32
- IN RAILROAD STOCK PRICES, 126-9, 178
- 5.7-YEAR (68.40-MONTH) CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 172-3, 176-8
- 5.8-YEAR (69.60-MONTH) CYCLE
- IN PIG IRON PRICES, 207-9
- 5.899-YEAR (70.79-MONTH) CYCLE
- THEORETICAL, 239
- 5.9-YEAR (70.80-MONTH) CYCLE
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- 6-YEAR (72-MONTH) CYCLE
- IN THE ADVERTISING EFFECTIVENESS OF PINKHAM MEDICINE COMPANY, 30, 32
- IN ALLIS CHALMERS MFG, DOLLAR SALES BILLED, 337, 342-3
- IN AMERICAN VISCOSE CORP., SHIPMENTS IN POUNDS, 337
- IN ARMOUR AND Co., DOLLAR SALES 282, 337, 338,
- IN ARMCO STEEL CORP., DOLLAR SALES, 337
- IN AUTOMOBILE SALES, 271, 275, 276
- IN BAROMETRIC PRESSURE AT NEW YORK CITY, 337
- IN BETHLEHEM STEEL Co., PRODUCTION IN NET TONS, 337
- IN CONTINENTAL OIL Co., GROSS OPERATING INCOME, 337
- IN COTTON PRICES, 337
- IN COTTON PRODUCTION, 337
- IN E. I. DU PONT DE NEMOURS & Co., DOLLAR SALES, 337
- IN GENERAL ELECTRIC Co., ORDERS RECEIVED, 123, 337, 340
- IN B.F. GOODRICH Co., DOLLAR SALES, 337
- IN GOODYEAR TIRE & RUBBER Co., NET DOLLAR SALES, 337,
- IN INDUSTRIAL COMMON STOCK PRICES, 166-7, 178, 337
- IN INLAND STEEL Co., NET DOLLAR SALES, 337
- IN JONES & LAUGHLIN STEEL CORP., TOTAL DOLLAR SALES, 337, 344, 345
- IN MONSANTO CHEMICAL Co., DOLLAR SALES, 337
- IN MONTGOMERY WARD & Co., NET DOLLAR SALES, 283, 337, 338, 348-9
- IN NATIONAL LEAD Co., NET SALES, 337
- IN NATURAL PHENOMENA, 341
- IN ADVERTISING EFFECTIVENESS OF THE PINKHAM MEDICINE Co 28
- IN PITTSBURGH PLATE GLASS Co NET DOLLAR SALES, 283 337-8, 348-9
- IN PROCTOR & GAMBLE Co., GROSS DOLLAR SALES, 337
- IN RAILROAD STOCK PRICES, 129
- IN RAYON PRODUCTION, 337
- IN REPUBLIC STEEL CORP., INGOT PRODUCTION, NET TONS, 337
- IN SEABOARD AIR LINE, GROSS OPERATING REVENUE, 337
- IN SEARS, ROEBUCK & COMPANY, NET SALES, 337, 346, 347
- IN STANDARD OIL OF CALIFORNIA, GROSS OPERATING INCOME, 337
- IN STOCK PRICES, 129, 239
- IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED, 337
- IN SWIFT & COMPANY, DOLLAR SALES, 337, 354, 355
- IN TREE RINGS AT FAIRLEE, VERMONT, 337
- IN U.S. RUBBER COMPANY, NET DOLLAR SALES, 220, 337
- IN WILSON & COMPANY, DOLLAR SALES, 337
- IN YOUNGSTOWN SHEET AND TUBE COMPANY, GROSS DOLLAR SALES, 337, 350, 351
- 6.07-YEAR CYCLE
- IN STOCK PRICES, 239
- 6.1-YEAR CYCLE
- IN INDUSTRIAL COMMON STOCK PRICES, 170, 171, 178
- IN PIG IRON PRICES, 207-9
- IN RAILROAD STOCK PRICES, 126-9, 178
- IN STOCK PRICES, 129
- 6.120-YEAR CYCLE
- THEORETICAL, 239
- 6.2-YEAR CYCLE
- IN RAILROAD STOCK PRICES, 126-9
- 6.3-YEAR CYCLE)

Volume III, 1952 Continued

- 6.4-YEAR CYCLE)
 - IN PIG IRON PRICES, 207-9
- 6.5-YEAR) CYCLE
- 6.6-YEAR) CYCLE
 - IN PIG IRON PRICES, 207-9
 - IN RAILROAD STOCK PRICES, 126-9, 178
- 6.610-YEAR CYCLE
 - THEORETICAL, 239
- 6.8-YEAR CYCLE
 - IN PIG IRON PRICES 207-9
- 6.86-YEAR CYCLE
 - IN STOCK PRICES, 239
- 6.9-YEAR) CYCLE
- 7.2-YEAR) CYCLE
 - IN PIG IRON PRICES, 207-9
 - IN RAILROAD STOCK PRICES, 126-9, 178
 - IN STOCK PRICES, 129
- 7-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
 - IN RAILROAD STOCK PRICES, 126-9, 178
- 7.22-YEAR CYCLE
 - IN STOCK PRICES, 239
- 7.370-YEAR CYCLE
 - THEORETICAL, 239
- 7.4-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 7.550-YEAR CYCLE
 - THEORETICAL, 239
- 7.6-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 7.7-YEAR CYCLE
 - IN STOCK PRICES, 5, 8, 129, 239
- 7.8-YEAR CYCLE
 - IN HARMONIC ANALYSIS OF COTTON PRICES, 5
 - IN RAILROAD STOCK PRICES, 126-9, 178
- 7.9-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 166-9, 178
 - IN PIG IRON PRICES, 207-9
 - IN RAILROAD STOCK PRICES, 126-9, 178
- 8-YEAR CYCLE
 - IN CIGARETTE PRODUCTION, 330
 - IN INDUSTRIAL COMMON STOCK PRICES, 5, 8
- 8.17-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 5, 8
 - IN STOCK PRICES, 239
 - THEORETICAL, 239
- 8.2-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 170, 171, 178
 - IN STOCK PRICES, 129
- 8.3-YEAR CYCLE
 - IN RAILROAD STOCK PRICES, 126-9, 178
- 8.320-YEAR CYCLE
 - THEORETICAL, 239
- 8.5-YEAR CYCLE
 - IN COTTON PRICES, 5
 - IN INDUSTRIAL COMMON STOCK PRICES, 166-9, 172, 173, 178
 - IN STOCK PRICES, 5, 8, 129, 239
- 9-YEAR CYCLE
 - HYPOTHETICAL, 280
 - IN NEW MEMBERS IN THE PRESBYTERIAN CHURCH IN U.S.A., 244
 - IN PIG IRON PRICES, 122
 - IN RAILROAD STOCK PRICES, 124
- IN SOCIAL DISEASE, 17
- IN STOCK PRICES, 23, 45, 46
- THEORETICAL, 239
- 9.1-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 9.2-YEAR CYCLE
 - IN COMMON STOCK PRICES, 23, 42, 44, 45, 56, 49, 110-20, 149, 239
 - IN PIG IRON PRICES, 122, 207
 - IN RAILROAD STOCK PRICES, 128, 178
- 9.3-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
 - IN PIG IRON PRICES, 122
- 9.6-YEAR CYCLE
 - IN ACREAGE OF WHEAT, 327
 - IN ARIZONA TREE RINGS WIDTH, *300
 - IN GAME ABUNDANCE IN WESTERN CANADA, 180
 - IN INDUSTRIAL COMMON STOCK PRICES, 8
 - IN LYNX ABUNDANCE 8, 284, 285
- 9.881-YEAR CYCLE
 - THEORETICAL, 239
- 10-YEAR CYCLE
 - IN STOCK PRICES, 129, 239
- 10.17-YEAR CYCLE
 - IN THE ADVERTISING EFFECTIVENESS OF PINKHAM MEDICINE COMPANY, 30, 32
- 10.2-YEAR) CYCLE
- 10.3-YEAR) CYCLE
 - IN RAILROAD STOCK PRICES, 126-9, 178
- 10.4-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 10.65-YEAR CYCLE
 - IN STOCK PRICES, 239
- 10.7-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 172, 173, 178
 - IN RAILROAD STOCK PRICES, 126-9
 - IN STOCK PRICES, 129
- 10.790-YEAR CYCLE
 - THEORETICAL, 239
- 10.8-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- 10.860-YEAR CYCLE
 - THEORETICAL, 239
- 10.9 TO 11.4-YEAR CYCLES
 - IN RAILROAD STOCK PRICES 126-9
- 11-YEAR CYCLE
 - IN INTERNATIONAL WAR, 201
 - IN STOCK PRICES, 129
- 11.07-YEAR) CYCLE
- 11.1-YEAR) CYCLE
 - IN PIG IRON PRICES, 207-9
 - IN STOCK PRICES, 239
- 11.2-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 178
 - IN INTERNATIONAL WAR, 135, 136, 140, 204
- 11.3-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- 11.75-YEAR CYCLE
 - THEORETICAL, 239
- 12-YEAR CYCLE
 - IN STOCK PRICES, 129
- 12.1-MONTH CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 170, 171, 178
- 12.2-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 12.5-YEAR CYCLE
 - IN STOCK PRICES, 239
- 12.7-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 168, 169, 178
- 12.75-YEAR CYCLE
 - THEORETICAL, 239
- 12.8-YEAR TO 13.3-YEAR CYCLES
 - IN RAILROAD STOCK PRICES, 126-9
- 13-YEAR CYCLE
 - IN AUTOMOBILE SALES, 271, 275, 276
- 13.1-YEAR CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 166, 167, 178
- 13.5-YEAR) CYCLE
- 13.6-YEAR) CYCLE
 - IN INDUSTRIAL COMMON STOCK PRICES, 129, 166, 167, 178
 - IN STOCK PRICES, 239
- 13.78-YEAR CYCLE
 - THEORETICAL, 239
- 13.8-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 14.45-YEAR CYCLE
 - IN RAILROAD STOCK PRICES 197-9
- 14.5-YEAR CYCLE
 - IN STOCK PRICES, 129, 239
- 14.88-YEAR CYCLE
 - THEORETICAL, 239
- 15.2-YEAR CYCLE
 - IN PIG IRON PRICES, 207-9
- 15.6-YEAR CYCLE
 - IN RAILROAD STOCK PRICES 126-9, 178
- 16-YEAR CYCLE
 - IN STOCK PRICES, 129, 239
 - IN THEORETICAL, 239
- 16.4-YEAR CYCLE
 - IN RAILROAD STOCK PRICES, 126-9
- 17.3-YEAR CYCLE
 - IN STOCK PRICES, 205-6
- 17.75-YEAR) CYCLE
- 17.8-YEAR) CYCLE
 - IN ARIZONA TREE RINGS WIDTH, 164
 - IN INDUSTRIAL COMMON STOCK PRICES, 166-7, 178
 - IN MANY PHENOMENA, 121
 - IN PIG IRON PRICES, 162, 207-207-9
- 18.17-YEAR CYCLE
 - STOCK PRICES, 239
- 18.33-YEAR CYCLE
 - IN REAL ESTATE CONSTRUCTION, 122
 - IN STOCK PRICES, 129
- 18.38-YEAR CYCLE
 - THEORETICAL, 239
- 19.0-YEAR) CYCLE
- 19.1-YEAR) CYCLE
 - IN ADVERTISING EFFECTIVENESS OF PINKHAM MEDICINE CO. 30, 32
 - IN INDUSTRIAL COMMON STOCK PRICES, 166-7, 178
 - IN RAILROAD STOCK PRICES, 126-9
- 19.4-YEAR)
- 19.45-YEAR) CYCLE
- 19.5-YEAR)
 - IN INDUSTRIAL COMMON STOCK PRICES, 124
 - IN RAILROAD STOCK PRICES, 23, 44, 121

Volume III, 1952 Continued

- IN STOCK PRICES, 42, 44, 129
239
- 19.6-YEAR CYCLE
--THEORETICAL, 239
- 20-YEAR CYCLE
--IN RAILROAD STOCK PRICES,
126-9, 178
--IN STOCK PRICES, 198-9
- 20.9-YEAR CYCLE
--THEORETICAL, 239
- 21-YEAR CYCLE
--IN STOCK PRICES, 129, 239
- 22.14-YEAR) CYCLE
22.20-YEAR)
--IN INTERNATIONAL WAR,
135-6, 138, 204
- 22.15-YEAR CYCLE
--STOCK PRICES, 239
- 22.24-YEAR CYCLE
--THEORETICAL, 239
- 22.5-YEAR (270-MONTH) CYCLE
--IN ADVERTISING EFFECTIVENESS
OF PINKHAM MEDICINE CO.,
30, 32
- 23.13-YEAR CYCLE
--STOCK PRICES, 239
- 23.3-YEAR CYCLE
--IN STOCK PRICES, 129
- 23.60-YEAR CYCLE
--THEORETICAL, 239
- 23.2-YEAR CYCLE
--IN INDUSTRIAL COMMON STOCK
PRICES, 166-7, 170-3, 178
- 25.8-YEAR CYCLE
--IN INDUSTRIAL COMMON STOCK
PRICES, 166-7, 178
- 26.1-YEAR CYCLE
--IN RAILROAD STOCK PRICES,
126-9, 178
- 27.8-YEAR CYCLE
--IN PIG IRON PRICES, 207-9
- 29.46-YEAR CYCLE
--THEORETICAL, 239
- 30-YEAR CYCLE
--IN STOCK PRICES, 129, 239
- 32.4-YEAR CYCLE
--IN RAILROAD STOCK PRICES,
126-9, 178
- 35.2-YEAR CYCLE
--IN CHINESE EARTHQUAKES,
14, 15, 219
- 35.9-YEAR CYCLE
--IN FREQUENCY OF THE AURORA
14, 15
- 37.0-YEAR) CYCLE
37.4-YEAR)
--IN CHINESE EARTHQUAKES,
14, 15, 212, 215-16
- 37.25-YEAR CYCLE
--IN STOCK PRICES, 239
- 37.5-YEAR CYCLE
--IN STOCK PRICES, 129
- 37.75-YEAR CYCLE
--THEORETICAL, 239
- 40-YEAR TO 48-YEAR CYCLE
--IN RAILROAD STOCK PRICES,
126-9
- 40.9-YEAR CYCLE
--IN STOCK PRICES, 297
- 51-YEAR CYCLE
--THEORETICAL, 239
- 51.5-YEAR CYCLE
--IN STOCK PRICES, 129, 239
- 52.2-YEAR CYCLE
--IN PIG IRON PRICES, 207-9
- 54-YEAR CYCLE
--IN COAL CONSUMPTION,
FRANCE, 84
--IN COAL PRODUCTION,
ENGLAND, 84
--IN INDUSTRIAL COMMON STOCKS
NOT YET FOUND, 84
--IN LEAD PRODUCTION, ENGLAND,
84
--IN THE NUMBER OF TEXTILE
WORKERS, IN ENGLAND, 84
- IN PIG IRON PRODUCTION, ENGLAND
84
- IN U. S. A. PRODUCTION, 85-6
- IN U. S. A. IRON AND STEEL
PRODUCTION, 86
- IN VALUE OF FRENCH RENTE
AND ENGLISH CONSOLS, 84
- IN WAGES OF AGRICULTURE
WORKERS, ENGLAND, 84
- IN WHEAT PRICES, ENGLAND,
84
- IN WHOLESALE PRICES,
GERMANY, 84
- IN WHOLESALE PRICES,
GREAT BRITAIN, 84
- IN WHOLESALE PRICES,
U. S. A. 84-5
- 54.5-YEAR CYCLE
--IN RAILROAD STOCK PRICES
126-9, 178
- 57-YEAR CYCLE
--IN INTERNATIONAL WAR,
135, 201, 210
- 60-YEAR TO 9 2-YEAR CYCLE
--IN RAILROAD STOCK PRICES,
126-9, 178
- 100-YEAR CYCLE
--IN RAILROAD STOCK PRICES,
126-9, 178
- IN MUSIC, 154
- 105-YEAR CYCLE
--IN WOMEN'S DRESS FASHIONS,
131-34
- 142-YEAR CYCLE
--IN INTERNATIONAL WAR, 201,4
- 151.8-YEAR CYCLE
--IN PIG IRON PRICES, 207-9
- 500-YEAR CYCLE
--IN MUSIC, 154
- 700-YEAR CYCLE
--IN CLIMATE AND IN THE AURORA
BOREALIS, 13

Volume IV, 1953, Index by Cycle Length

NOTE: THIS INDEX DOES NOT LIST THE HARMONICS OF THE SYNODIC PERIODS OF THE PLANETS, THE HARMONICS OF THE SIDERIAL PERIODS OF THE PLANETS, OR THE HARMONICS USED BY C. N. ANDERSON TO REPRESENT SUNSPOT NUMBERS WITH ALTERNATE CYCLES REVERSED. FOR THESE CYCLE LENGTHS REFER TO PAGES 144, 144 AND 200-1, AND 148, RESPECTIVELY.

NEITHER DOES THIS INDEX LIST ANY OF THE CYCLES REFERRED TO IN ANY OF THE SUPPLEMENTS. FOR A LIST OF THE CYCLES IN INDUSTRIAL COMMON STOCK PRICES ISOLATED BY VEDDER HUGHEY, REFER TO PAGES 90-3, 126-9, 160-1.

- 60-MINUTE CYCLE
--IN ERUPTION OF CLIFF
GEYSER, 8
- 65.12-MINUTE CYCLE
--IN ERUPTION OF OLD
FAITHFUL GEYSER, 6
- 90--100-MINUTE CYCLE
--IN ERUPTION OF DAISEY
GEYSER, 8
- 3-HOUR CYCLE
--IN ERUPTION OF SAWMILL
GEYSER, 8
- 5 1/2--8-HOUR CYCLE
--IN ERUPTION OF RIVERSIDE
GEYSER, 8
- 6-HOUR CYCLE
--IN DAILY VARIATION OF AIR
TEMPERATURE AT POTSDAM,
GERMANY, 346
- 8-HOUR CYCLE
--IN DAILY VARIATION OF AIR
TEMPERATURE AT POTSDAM,
GERMANY, 346
- 8--10-HOUR CYCLE
- 12-HOUR CYCLE
--IN DAILY VARIATION OF AIR
TEMPERATURE AT POTSDAM,
- GERMANY, 346
- 18-HOUR CYCLE
--IN ERUPTION OF VALENTINE
GEYSER, 7
- 24-HOUR CYCLE
--IN ERUPTION OF ARTEMISIA
GEYSER, 7
--IN DAILY VARIATION OF AIR
TEMPERATURE AT POTSDAM,
GERMANY, 346
- 2--40-DAY CYCLES
--IN HUMAN BEHAVIOR, 281
- 14-DAY CYCLE
--IN HUMAN BEHAVIOR, 231
- 20-DAY CYCLE
--IN HUMAN BEHAVIOR, 231
- 30--40-DAY CYCLE
--IN HUMAN BEHAVIOR, 231
- 45 6/7-DAY (6.55-WEEK) CYCLE
--IN ERUPTION OF GREAT
FOUNTAIN GEYSER, 7
IN STOCK PRICES, 168, 178-
181, 230
- 2.14-MONTH CYCLE
--IN SOLAR CONSTANT, 107-8
- 3.20-MONTH CYCLE
--IN SOLAR CONSTANT, 107
- 4.33-MONTH CYCLE
--IN SOLAR CONSTANT, 107
- 5.06-MONTH CYCLE
--IN SOLAR CONSTANT, 107-8
- 6.03-MONTH CYCLE
--IN SOLAR CONSTANT, 107
- 6.33-MONTH CYCLE
--IN STOCK PRICES, 342
- 6.41-MONTH CYCLE
--IN STOCK PRICES, 228, 342
- 7-MONTH CYCLE
--IN SOLAR CONSTANT, 107-8
- 8.07-MONTH CYCLE
--IN SOLAR CONSTANT, 107
- 9.10-MONTH CYCLE
--IN SOLAR CONSTANT, 107-8
- 9.6-MONTH CYCLE
--IN EGG LAYING, 314
- 9.70-MONTH CYCLE
--IN SOLAR CONSTANT, 107-8
- 10.54-MONTH) CYCLE
10.60-MONTH)
--IN SOLAR CONSTANT, 107-8
--IN STOCK PRICES, 108
- 10.85-MONTH CYCLE
--IN STOCK PRICES, 108
- 11.1-MONTH) CYCLE

Volume IV, 1953 Continued

11.2-MONTH)
 --IN SOLAR CONSTANT, 107-8
 --IN STOCK PRICES, 108
 11.43-MONTH) CYCLE
 11.50-MONTH)
 --IN SOLAR CONSTANT, 107-8
 --IN STOCK PRICES, 108
 12-MONTH CYCLE
 --IN SOLAR CONSTANT, 107-8
 --IN STOCK PRICES, 108
 12.5-MONTH CYCLE
 --IN STOCK PRICES, 108
 13.10-MONTH CYCLE
 --IN SOLAR CONSTANT, 107-8
 --IN STOCK PRICES, 108
 13.7-MONTH CYCLE
 --IN STOCK PRICES, 108
 14.5-MONTH CYCLE
 --IN STOCK PRICES, 108
 15.17-MONTH) CYCLE
 15.3 -MONTH)
 --IN SOLAR CONSTANT, 107-8
 --IN STOCK PRICES, 108
 16.4-MONTH CYCLE
 --IN STOCK PRICES, 108
 17.3-MONTH CYCLE
 --IN STOCK PRICES, 108
 18.3-MONTH CYCLE
 --IN STOCK PRICES, 108
 19.6-MONTH CYCLE
 --IN STOCK PRICES, 108
 21-MONTH CYCLE
 --IN THE PRICES OF MALLEABLE
 IRON PIPE FITTINGS, 34
 21.6-MONTH CYCLE
 --IN STOCK PRICES, 108
 22.75-MONTH CYCLE
 --IN SOLAR CONSTANT, 107-8
 23.7-MONTH CYCLE
 --IN STOCK PRICES, 108
 1-MONTH (2-YEAR) CYCLE
 --IN COTTON PRODUCTION, 9
 --IN THE PRODUCTION OF
 VISCOSE RAYON FILAMENT YARN,
 43, 45, 47, 50-3, 56-61
 24.75-MONTH (2.06-YEAR) CYCLE
 --IN SOLAR CONSTANT, 107-8
 25.8-MONTH (2.15-YEAR) CYCLE
 --IN STOCK PRICES, 108
 28.6-MONTH (2.38-YEAR) CYCLE
 --IN STOCK PRICES, 108
 29.2-MONTH (2.4-YEAR) CYCLE
 --IN COPPER PRICES, 104
 --IN PIG IRON PRICES, 104
 --IN STOCK PRICES, 104
 30-MONTH (2.5-YEAR) CYCLE
 --IN THE PRICES OF MALLEABLE
 IRON PIPE FITTINGS, 34
 30.33-MONTH (2.52-YEAR) CYCLE
 --IN SOLAR CONSTANT, 107-8
 31.2-MONTH (2.6-YEAR) CYCLE
 --IN STOCK PRICES, 108
 32.88-MONTH (2.74-YEAR) CYCLE
 33.0 -MONTH (2.75-YEAR) CYCLE
 --IN THE PRODUCTION OF VISCOSE
 RAYON FILAMENT YARN, 43, 52-3,
 59-61
 --IN EUROPEAN WHEAT PRICES, 340
 34.50-MONTH (2.86-YEAR) CYCLE
 --IN SOLAR CONSTANT, 107-8
 35.60-MONTH (2.97-YEAR) CYCLE
 --IN STOCK PRICES, 108
 3.25-YEAR (39-MONTH) CYCLE
 --IN SOLAR CONSTANT, 107-8
 3 1/3-YEAR (40-MONTH) CYCLE
 --IN MAMMALIAN AND BIRD
 SPECIES, 231
 3.4 -YEAR (41.0-MONTH)) CYCLE
 42-YEAR (41.04-MONTH)
 --IN BUSINESS FAILURES, 262-6
 --IN EUROPEAN WHEAT PRICES,
 340-1
 --IN THE PRICES OF MALLEABLE
 IRON PIPE FITTINGS, 34

3.47-YEAR (41.6-MONTH) CYCLE
 --IN STOCK PRICES, 108
 3.5-YEAR (42-MONTH) CYCLE
 --IN CONTINENTAL OIL COMPANY
 INCOME, 172-4
 --IN THE PRODUCTION OF VISCOSE
 RAYON FILAMENT YERN, 43, 46-7,
 49-50, 52-3, 57-61
 3.66-YEAR (44-MONTH) CYCLE
 --IN THE PRICES OF MALLEABLE
 IRON PIPE FITTINGS, 34
 3.7-YEAR (45.50-MONTH) CYCLE
 --IN SOLAR CONSTANT, 107-8
 3.8-YEAR (46-MONTH) CYCLE
 --IN STOCK PRICES, 120
 4-YEAR (48-MONTH) CYCLE
 --IN EUROPEAN WEATHER, 340
 --IN MICE IN NEW YORK STATE, 219
 --IN PRESIDENTIAL ELECTIONS, 219
 --IN RAYON PRODUCTION, 43
 4.10-YEAR (49.2-MONTH) CYCLE
 --IN EUROPEAN WEATHER, 340
 4.2-YEAR (50.40-MONTH) CYCLE
 --IN STOCK PRICES, 108
 4.33-YEAR (51.95-MONTH) CYCLE
 --IN EUROPEAN WEATHER, 340
 4.42-YEAR (53.04-MONTH) CYCLE
 --IN EUROPEAN WHEAT PRICES, 340
 4.5-YEAR (54-MONTH) CYCLE
 --IN STOCK PRICES, 273
 4.5-YEAR (54.50-MONTH) CYCLE
 --IN SOLAR CONSTANT, 107-8
 4.67-YEAR (56-MONTH) CYCLE
 --IN EUROPEAN WEATHER, 340
 4.7-YEAR (55.4-MONTH) CYCLE
 --IN U. S. WHEAT PRICES, 222-7
 5-YEAR (60-MONTH) CYCLE
 --IN EUROPEAN WHEAT PRICES, 340-1
 5.04-YEAR (60.5-MONTH) CYCLE
 --IN STOCK PRICES, 108
 5.10-YEAR (61.2-MONTH) CYCLE
 --IN EUROPEAN WHEAT PRICES, 340-1
 5.33-YEAR (63.96-MONTH) CYCLE
 --IN EUROPEAN WEATHER, 340
 5.42-YEAR (65.04-MONTH) CYCLE
 --IN EUROPEAN WHEAT PRICES, 340
 5.50-YEAR (66-MONTH) CYCLE
 --IN EUROPEAN WEATHER, 340
 5.57-YEAR CYCLE
 --IN COTTON PRICES, 40
 5.67-YEAR (68-MONTH) CYCLE
 --IN SOLAR CONSTANT, 107-8
 5.67-YEAR (68.05-MONTH) CYCLE
 --IN EUROPEAN WHEAT PRICES, 340-1
 5.9-YEAR (70.8-MONTH))
 5.96-YEAR (71.52-MONTH)
 --IN BUSINESS FAILURES, 262, 264-8
 --IN EUROPEAN WHEAT PRICES, 340
 --IN COTTON PRICES, 40
 6-YEAR (72-MONTH) CYCLE
 --IN ALLIS CHALMERS SALES, 21
 --IN AMERICAN VISCOSE SHIP-
 MENTS, 21, 24, 28
 --IN ARMCO STEEL SALES, 21,
 115-6
 --IN ARMOUR SALES, 21, 24, 29
 --IN BETHLEHEM STEEL PRODUCTION,
 21, 215-8
 --IN BUSINESS FAILURES, 264
 --IN CONTINENTAL OIL INCOME,
 21, 171-4, 190-1
 --IN COTTON PRICES, 40, 215
 --IN COTTON PRODUCTION, 9
 --IN DU PONT SALES, 21, 25-6, 30
 --IN EUROPEAN WEATHER, 340
 --IN B. F. GOODRICH TIRE AND
 RUBBER SALES, 21
 --IN JONES & LAUGHLIN SALES, 21
 --IN MONSANTO SALES, 21, 26, 31
 --IN MONTGOMERY WARD SALES, 21,
 26, 32
 --IN NATIONAL LEAD SALES, 21,
 26, 33
 --IN NATURAL PHENOMENA, 215

--IN PITTSBURGH PLATE GLASS
 SALES, 21
 --IN PROCTOR AND GAMBLE SALES,
 21, 307-8
 --IN PRODUCTION OF RAYON YARN,
 43, 47, 50, 52-3, 58-61
 --IN REPUBLIC STEEL PRODUCTION,
 21
 --IN SEABOARD AIRLINE REVENUE, 21
 --IN SEARS, ROEBUCK SALES, 21, 193
 --IN STANDARD OIL OF CALIFORNIA
 INCOME, 21
 --IN STANDARD OIL OF NEW JERSEY
 INCOME, 21
 --IN SWIFT AND COMPANY SALES, 21
 --IN U. S. RUBBER SALES, 21
 --IN WILSON & COMPANY SALES, 21,
 191-2
 --IN YOUNGSTOWN SHEET AND TUBE
 SALES, 21
 6.11-YEAR CYCLE
 --IN COTTON PRODUCTION, 40
 6.17-YEAR CYCLE
 --IN EUROPEAN WEATHER, 340
 6.25-YEAR CYCLE
 --IN STOCK PRICES, 108
 6.45-YEAR CYCLE
 --IN COTTON PRODUCTION, 265
 6.5-YEAR CYCLE
 --IN BUSINESS FAILURES, 265-9
 7.42-YEAR CYCLE
 --IN EUROPEAN WHEAT PRICES,
 340-1
 7.46-YEAR CYCLE
 --IN ABUNDANCE OF LYNX, 231
 7.47-YEAR CYCLE
 --IN CLIMATE, 341
 7.50-YEAR CYCLE
 --IN EUROPEAN WEATHER, 340
 --IN WHEAT PRICES, U. S.,
 182, 184-8, 222-6
 7.54-YEAR CYCLE
 --IN BAROMETRIC PRESSURE,
 341
 --IN SUNSPOTS, 341
 7.6-YEAR CYCLE
 --IN SOLAR CONSTANT, 107-8
 7.67-YEAR CYCLE
 --IN EUROPEAN WEATHER, 340
 7.80-YEAR CYCLE
 --IN BAROMETRIC PRESSURE,
 NEW YORK, 142-3, 145
 --IN COTTON PRICES, 143
 --IN RAILROAD STOCK PRICES,
 143
 --IN SUNSPOT NUMBERS WITH
 ALTERNATE CYCLES REVERSED,
 143-4
 7.95-YEAR CYCLE
 --IN ABUNDANCE OF LYNX, 142-3
 --IN CIGARETTE PRODUCTION,
 142-3
 --IN COTTON PRICES, 143
 --IN INDUSTRIAL COMMON STOCK,
 PRICES, 143
 --IN PIG IRON PRODUCTION, 143
 --IN RAILROAD STOCK PRICES,
 143
 8.0-YEAR CYCLE
 --IN CIGARETTE PRODUCTION,
 143-4
 --IN COTTON PRICES, 143
 --IN CYCLIC FORCES, 143
 --IN ECONOMIC PHENOMENA, 142
 --IN ERUPTION OF EXCELSIOR
 GEYSER, 8
 --IN INDUSTRIAL COMMON STOCK
 PRICES, 142
 --IN PLANETARY RELATIONSHIPS,
 144
 --IN SUNSPOT NUMBERS, 143
 --IN SUNSPOT NUMBERS WITH
 ALTERNATE CYCLES REVERSED
 143-4

Volume IV, 1953 Continued

..IN WEATHER AND AVERAGE YIELD OF CROPS. 143	10.44-YEAR) CYCLE	VARIATIONS. 112
9.05-YEAR CYCLE	10.45-YEAR)	19.90-YEAR CYCLE
..IN ABUNDANCE OF PARTRIDGE. 143	..IN CRISES. 305-6	..IN EUROPEAN WHEAT PRICES. 340-1
..IN EUROPEAN WHEAT PRICES. 143. 340-1	..IN SUNSPOTS. 305	22 OR 23-YEAR CYCLE
8.15-YEAR) CYCLE	10..11-YEAR CYCLE	..IN EUROPEAN WEATHER. 340
8.16-YEAR)	..NOT IN CROPS. 305	22.2 -YEAR)
..IN INDUSTRIAL COMMON STOCK PRICES. 143	11-YEAR CYCLE	22.25-YEAR) CYCLE
..IN EUROPEAN WEATHER. 143. 340	..IN EUROPEAN WHEAT PRICES. 340	22.3 -YEAR)
..IN PIG IRON PRODUCTION. 143	11.2-YEAR CYCLE	..IN ABUNDANCE OF LYNX 231
8.2 -YEAR) CYCLE	..IN MANUFACTURING PRODUCTION. 302-3. 305. 333-4	..IN ELECTRICAL POLARITY OF SUNSPOTS. 341
8.21-YEAR)	..IN SUNSPOTS. 304-5	..IN INTERNATIONAL BATTLES. 251
..IN ARIZONA TREE RINGS. 143	11.40-YEAR CYCLE	..IN SUNSPOT NUMBERS WITH ALTERNATE CYCLES REVERSED. 149
..IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED. 143-4	..IN EUROPEAN WEATHER. 340	22.67-YEAR (272-MONTH)) CYCLE
8.33-YEAR CYCLE	11.75-YEAR CYCLE	22.68-YEAR (273.17-MONTH)) CYCLE
..IN RAILROAD STOCK PRICES. 143	..IN ABUNDANCE OF LYNX. 231	..IN ABUNDANCE OF EUROPEAN PARTRIDGE. 109-11
9.5-YEAR CYCLE	12.05-YEAR CYCLE	..IN SOLAR HEAT. 105
..IN STOCK PRICES. 108	..IN EUROPEAN WHEAT PRICES. 340	..IN 1/2 SYNODIC PERIOD OF SATURN AND URANUS. 106
8.67-YEAR CYCLE	12.6-YEAR CYCLE	24.0-YEAR CYCLE
..IN EUROPEAN WEATHER. 340	..IN STOCK PRICES. 108	..IN EUROPEAN WHEAT PRICES. 340
9.0-YEAR CYCLE	12.84-YEAR CYCLE	25.4-YEAR CYCLE
..IN ABUNDANCE OF LYNX. 231	..IN EUROPEAN WHEAT PRICES. 340-1	..IN STOCK PRICES. 108
..IN PIG IRON PRICES. 4	13-YEAR CYCLE	35.2-YEAR CYCLE
..IN PRESBYTERIAN CHURCH MEMBERSHIP. 150	..IN EUROPEAN WEATHER. 340	..IN ABUNDANCE OF LYNX. 231
9..11-YEAR CYCLE	..IN MANUFACTURING PRODUCTION. 333. 335	35.5-YEAR CYCLE
..IN ABUNDANCE OF SNOWSHOE RABBITS. 314	14-YEAR CYCLE	..IN EUROPEAN WEATHER. 340-1
9.2-YEAR) CYCLE	..IN EUROPEAN WEATHER. 340	36.5-YEAR CYCLE
9.3-YEAR)	14..15-YEAR CYCLE	..IN SEVERE WINTERS IN EUROPE. 312
..IN BUSINESS FAILURES. 260-2. 264-9	..IN BEEF CATTLE PRICES. 338-9	37-YEAR CYCLE
..IN GRASSHOPPER OUTBREAKS. 176-7	15-YEAR CYCLE	..IN WHEAT PRICES IN ENGLAND. 312
..IN MANUFACTURING PRODUCTION. 333-4	..IN EUROPEAN WEATHER. 340	54-YEAR CYCLE
..IN STOCK PRICES. 276. 293-4	15.23-YEAR CYCLE	..IN EUROPEAN WHEAT PRICES. 341
..IN WHEAT PRICES. U. S.. 139-41. 182. 186-8. 222-5	..IN EUROPEAN WHEAT PRICES. 340-1	..IN MANUFACTURING PRODUCTION. 300-3. 302. 332
9.5-YEAR CYCLE	15.5-YEAR CYCLE	..IN PRICES. 212. 349
..IN EUROPEAN WEATHER. 340-1	..IN ABUNDANCE OF LYNX. 231	..IN PRODUCTION. 212. 349
9.6-YEAR CYCLE	17-YEAR CYCLE	68-YEAR CYCLE
..IN ABUNDANCE OF LYNX. 231	..IN EUROPEAN WEATHER. 340	..IN EUROPEAN WHEAT PRICES. 341
9.75-YEAR CYCLE	..IN EUROPEAN WHEAT PRICES. 340	130-YEAR CYCLE
..IN EUROPEAN WHEAT PRICES. 340-1	17.75-YEAR CYCLE	..IN ECONOMY AND WASTE. 343
10-YEAR CYCLE	..IN COMMERCIAL AND INDUSTRIAL FAILURES. 255-60. 262. 265-6. 268	1100-YEAR) CYCLE
..IN ABUNDANCE OF MOSKRAT. 66	18.0-YEAR) CYCLE	1115-YEAR) CYCLE
..IN POLITICAL LANDSLIDES. 5	18.3-YEAR) CYCLE	..IN CIVILIZATION. 343
10.08..11.4-YEAR CYCLE	..IN BUILDING CONSTRUCTION. 230	
..IN SUNSPOTS. 305	..IN REAL ESTATE. 230	
10.43-YEAR)	18.6-YEAR CYCLE	
	..IN THE EARTH'S AXIAL	

Volume V, 1954, Index by Cycle Length

2-WEEK CYCLE

..OF SEX DESIRE. 307

4-WEEK CYCLE

..OF SEX DESIRE. 307

3.5-MONTH CYCLE

..IN TOTAL SPOTTEDNESS OF THE SUN. 293

6.41-MONTH CYCLE

..IN STOCK PRICES. 141

33-WEEK CYCLE

..IN CANCER. RECURRENCE OF. 346

..IN INFLUENZA. OUTBREAKS OF. 346

..IN MENTAL DISEASE. 345

Volume V, 1954 Continued

--IN NEW CREATIVE WORK OF POETS,
MUSICIANS, AND WRITERS. 345
3.7-MONTH CYCLE
--IN AUTOMOBILE SALES. 321, 347-51
24-MONTH (2-YEAR) CYCLE
--IN DEMAND FOR SHIRTS. CONJECTURAL. 85
--IN GOODYEAR TIRE & RUBBER SALES. 9
--IN TEXTILES. 250
27.5-MONTH (2.29-YEAR) CYCLE
--IN STOCK PRICES. 54-5
28-MONTH CYCLE
--IN ADVERTISING EFFECTIVENESS. 140
29.2-MONTH (2.34-YEAR) CYCLE
--IN THE BAROMETRIC PRESSURE OF
BATAVIA. 24
29.2-MONTH (2.44-YEAR) CYCLE
--IN STOCK PRICES. 54-5
30-MONTH (2.5-YEAR) CYCLE
--IN LATITUDE OF SUNSPOTS. 293
31.0-MONTH (2.58-YEAR) CYCLE
--IN STOCK PRICES. 54-5
33-MONTH (2.75-YEAR) CYCLE
--IN BUILDING CONSTRUCTION. 137-38.
260
--IN TEXTILES. 250
3-YEAR (35-MONTH) CYCLE
--IN AUTOMOBILE SALES 321-3, 347-51
--IN STOCK PRICES. 135
3.36-YEAR (40.3-MONTH) CYCLE
--IN THE BAROMETRIC PRESSURE OF
BATAVIA. 24
4-YEAR (41-MONTH) CYCLE
--IN AUTOMOBILE SALES. 245-7, 286-291.
321-3, 344, 349-51
--IN BUILDING CONSTRUCTION. 250
--IN BUSINESS. 292
--IN COMMON STOCK PRICES. 175-179, 262.
356
--IN CONTINENTAL OIL INCOME. 183
--IN DU PONT SALES. 205, 211-14
--IN TEXTILES. 260
3.69-YEAR (44.3-MONTH) CYCLE
--IN INVASIONS OF THE PINE GROSBEAR.
155
3.84-YEAR (45-MONTH) CYCLE
--IN STOCK PRICES. 136
4-YEAR (48-MONTH) CYCLE
--IN THE ABUNDANCE OF ARCTIC FOXES. 24
--IN INVASIONS OF THE PINE GROSBEAR.
155
4.22-YEAR (50.7-MONTH) CYCLE
--IN DEATHS (ALL CAUSES) IN
MASSACHUSETTS. 172
--IN DEATHS (TUBERCULOSIS) IN
MASSACHUSETTS. 172
--IN FREEZING AND THAWING OF ARCTIC
RIVERS. 156
--IN GLACIAL VARVES. 167
--IN INVASIONS OF THE PINE GROSBEAR.
155
--IN TEMPERATURE AT THE LOCATION LIST.

ED BELOW. 158-70. 172. 175
Spitzbergen
Upernivik, Greenland
Ojessevar-Mohavn, Norway
Jacobshavn, Greenland
Stykkishola, Iceland
Archangel, Russia
Nome, Alaska
Dawson, Yukon Territory
Ivigut, Greenland
Bergen, Norway
Helsinki, Finland
Sverdlovsk, Russia
Tomsk, Siberia
Edinburgh, British Isles
Moscow, Russia
Copenhagen, Denmark
Omsk, Siberia
Vilno, Poland
Edmonton, Alberta
Nikolayev-on-Asur, Siberia
Berkerville, Canada
Berlin, Germany
Irkutsk, Siberia
Greenwich, British Isles
Nerdhinsky, Siberia
Vienna, Austria
Alma Ata, Siberia
Detroit, Michigan
Chicago, Illinois
Cheyenne, Wyoming
New Haven, Connecticut
New York, New York
Krasnovodsk, Siberia
Nashville, Tennessee
Tokyo, Japan
Charleston, South Carolina
San Diego, California
Alexandria, Egypt
Mobile, Alabama
Abassia, Egypt
Bashire, Persia
Jask, Persia
Allahabad, Egypt
Havana, Cuba
Hongkong, China
Honolulu, Hawaii
Akyat, Burma
Mexico City, Mexico
Bombay, India
Kndra, India
Bangalore, India
Aden, Arabia
Port Blair, India
Trinidad, B.W.I.
Colen, Canal Zone
Trincomele, Ceylon
Georgetown, British Guiana
Bandahna, Borneo
Singapore
Entebbe, Uganda
Seychelles Island
Quixerenobis, Brazil
Fantibar, East Africa
Batavia, Java
Port Moresby, New Guinea
Darwin, Australia
Apia, Samoa
St. Helena
Salisbury, Rhodesia
Antananarivo, Madagascar
Bulawago, Rhodesia
Rio de Janeiro, Brazil
Sao Paulo, Brazil
Salta, Argentina
Brisbane, Australia
Goyr, Argentina
Durban, South Africa
Cordoba, Argentina
Santiago, Chile
Sydney, Australia
Capetown, South Africa
Buenos Aires, Argentina
Montevideo, Uruguay
Adelaide, Australia
Aukland, New Zealand
Punta Galera, Chile
Wellington, New Zealand
Sarmiento, Argentina
Dunedin, New Zealand
Santa Cruz, Argentina
Cape Pembroke, Falkland Islands
Islote de los Evangelistas, Chile
Punto Arenas, Chile
Orytviken, South Georgia
Laurie Island, South Orkneys
--IN TERRESTRIAL MAGNETISM. 158-9. 175
--IN TREE RINGS IN ALASKA. 168-9. 172.
175
--IN TREE RINGS IN ARIZONA. 157-9. 175
--IN TREE RINGS IN JAVA. 158-9. 172.
175
--IN TREE RINGS IN PENNSYLVANIA. 168-9.

172. 175
--IN TREE RINGS IN VERMONT. 158-9. 172
175
--IN TREE RINGS IN THE YUKON. 168-9.
172. 175
--IN WEATHER RECORDS. 174
4. 67-YEAR (55-MONTH) CYCLE
--IN ADVERTISING EFFECTIVENESS. 140
4.89-YEAR (58.7-MONTH) CYCLE
--IN STOCK PRICES. 218-220
5.50-YEAR (65-MONTH) CYCLE
--IN STOCK PRICES. 218-220
5.575-YEAR (65.9-MONTH) CYCLE
--IN COTTON PRICES. 277
5.91-YEAR (71-MONTH) CYCLE
--IN COTTON PRICES. 277, 283, 344
5.97-YEAR (72-MONTH) CYCLE
--IN THE BAROMETRIC PRESSURE OF
BATAVIA. 24
6-YEAR (72-MONTH) CYCLE
--IN ADVERTISING EFFECTIVENESS. 140
--IN AUTOMOBILE SALES. 245, 250, 297
290
--IN BUSINESS. 4
--IN CONTINENTAL OIL INCOME. 183.
227-32
--IN DU PONT SALES. 185-7, 205-14
--IN GOODYEAR TIRE AND RUBBER CO.
SALES. 8, 10-12, 184-5
--IN MANUFACTURING PRODUCTION. 4
--IN MONSANTO CHEMICAL SALES. 353.
356-8
--IN NATIONAL LEAD SALES. 353, 359-60
--IN PITTSBURGH PLATE GLASS COMPANY
SALES. 13-16
--IN SEARS, ROEBUCK SALES 180-2
--IN STANDARD OIL OF CALIFORNIA.
353, 360-1
--IN SWIFT AND COMPANY SALES. 353.
354-5
--IN VARIOUS COMPANIES AND PHENOMENA.
163, 203-4
5.07-YEAR CYCLE
--IN STOCK PRICES. 218-20
6.11-YEAR CYCLE
--IN COTTON PRICES. 277
6.45-YEAR CYCLE
--IN COTTON PRICES. 277
6.86-YEAR CYCLE
--IN STOCK PRICES. 218-20
7.3-YEAR CYCLE
--IN DU PONT SALES. 205-214
7.32-YEAR CYCLE
--IN THE BAROMETRIC PRESSURE OF
BATAVIA. 24
7.60-YEAR CYCLE
--IN SUNSPOT NUMBERS. 17
8-YEAR CYCLE
--IN BUSINESS. 4
--IN CIGARETTE PRODUCTION. 85, 256-8
--IN GOODYEAR TIRE & RUBBER CO. SALES.

Volume V, 1954 Continued

- 8-12, 184-5
- 8.17-YEAR CYCLE
--IN STOCK PRICES, 218-220
- 8.36-YEAR CYCLE
--IN SUNSPOT NUMBERS, 17
- 8.47-YEAR CYCLE
--IN THE BAROMETRIC PRESSURE OF BATAVIA, 24
- 8.5-YEAR CYCLE
--IN PIG IRON PRICES, 85-87, 92-95
- 8.6-YEAR CYCLE
--IN COPPER PRICES, 352
- 8.76-YEAR CYCLE
--IN SUNSPOT NUMBERS, 17
- 9-YEAR CYCLE
--IN BUSINESS, 292
--IN VENEREAL DISEASE, 316
- 9.2-YEAR CYCLE
--IN BUSINESS FAILURES, 314
--IN GRASSHOPPER ABUNDANCE, 316-8
--IN PIG IRON PRICES, 43, 83, 86-95, 244, 315
--IN PRICES, 315
--IN STOCK PRICES, COMBINED, 219-20
INDUSTRIAL, 316
RAILROAD 316
--IN TREE RINGS, 316-17
- 9.3-YEAR CYCLE
--IN COPPER PRICES, 352
--IN SUNSPOT NUMBERS, 17, 316-7
--IN WHEAT PRICES, 317
- 9.6-YEAR CYCLE
--IN CHINCH BUGS, ABUNDANCE OF, 250
--IN LYNX, ABUNDANCE OF, 250-1, 320
--IN MAMMALS IN CANADA, 250
--IN RABBITS, SNOWSHOE (VARYING HARE) ABUNDANCE OF, 250, 320
--IN RAINFALL IN CANADA, 250
--IN SALMON (ATLANTIC), 250, 320
- IN TREE RINGS, 250
--IN WEATHER, 250
--IN WHEAT, ACREAGE OF, 320
- 10.59-YEAR CYCLE
--IN SUNSPOT NUMBERS, 17
- 11-YEAR CYCLE
--IN STOCK PRICES, 218-220
--IN SUNSPOT NUMBERS, 172, 293
- 11.12-YEAR CYCLE
--IN THE BAROMETRIC PRESSURE OF BATAVIA, 24
- 11.25-YEAR CYCLE
--IN SUNSPOT NUMBERS, 17, 284-5
- 12-YEAR CYCLE
--IN STOCK PRICES, 218-220
- 13-YEAR CYCLE
--IN AUTOMOBILE SALES, 245, 287, 290
- 14.7-YEAR CYCLE
--IN STOCK PRICES, 218-220
- 15-YEAR CYCLE
--IN GRASSHOPPER ABUNDANCE, 316-7
--IN PRECIPITATION, CONJECTURAL, 298
- 15.75-YEAR CYCLE
--IN TRANSIT OF SUNSPOTS, 173
- 15.87-YEAR CYCLE
--IN THE BAROMETRIC PRESSURE IN BATAVIA, 24
- 18 1/3-YEAR CYCLE
--IN BUILDING CONSTRUCTION, 260
--IN BUSINESS, 292
- 21-YEAR CYCLE
--IN STOCK PRICES, 218-220
- 22-YEAR }
23-YEAR } CYCLE
--IN ADVERTISING EFFICIENCY, 140, 317
--IN FEMALE AILMENTS, EPIDEMICS OF, 140
--IN GRASSHOPPER OUTBREAKS, 316-9
--IN INTERNATIONAL BATTLES, NUMBER OF 317
- IN LAKE AND RIVER LEVELS, 317
--IN LYNX IN CANADA, ABUNDANCE OF, 317
--IN POSTAL RECEIPTS AT MILWAUKEE, 317
--IN RAINFALL, 298
--IN ROCK DEPOSIT WIDTHS, 317
--IN SUNSPOTS WITH ALTERNATE CYCLES REVERSED, 173, 317
--IN TREE RINGS, 317
--IN WEATHER IN THE UNITED STATES, 317
--IN WHOLESALE PRICES, 317
- 36-YEAR CYCLE
--IN BAROMETRIC PRESSURE OF BATAVIA, 24
--IN MANUFACTURING PRODUCTION, 5-7, 44-53, 128-9, 131
- 37-YEAR CYCLE
--IN LENGTH OF THE SUNSPOT CYCLES, 293
- 50-YEAR CYCLE
--IN MANUFACTURING PRODUCTION, 3, 5-7, 44-53, 127-9, 131
- 52-YEAR CYCLE
--IN AZTEC CULTURE, 17
- 54-YEAR CYCLE
--IN BRITISH WHEAT PRICES, 7
--IN BUSINESS, 17, 292
--IN PRICES, 3
- 83-YEAR CYCLE
--IN LENGTH OF THE SUNSPOT CYCLES, 293
- 90.4-YEAR CYCLE
--IN RAINFALL, 298
- 220-YEAR CYCLE
--IN POPULATION OF BRITISH PQETS, 133-135, 364
- 300-YEAR CYCLE
--IN LENGTH OF SUNSPOT CYCLES, 293
- 1500-YEAR CYCLE
--IN THE LENGTH OF SUNSPOT CYCLES, 293

Calendars for 201 Years, 1776-1976

INDEX OF YEARS

| Calendar Number |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1776.....1 | 1809.....10 | 1844.....1 | 1876.....8 | 1909.....4 | 1944.....5 |
| 1777.....2 | 1810.....6 | 1845.....2 | 1877.....6 | 1910.....9 | 1945.....6 |
| 1778.....3 | 1811.....7 | 1846.....3 | 1878.....7 | 1911.....10 | 1946.....7 |
| 1779.....4 | 1812.....14 | 1847.....4 | 1879.....2 | 1912.....1 | 1947.....2 |
| 1780.....5 | 1813.....4 | 1848.....5 | 1880.....8 | 1913.....2 | 1948.....8 |
| 1781.....6 | 1814.....9 | 1849.....6 | 1881.....9 | 1914.....3 | 1949.....9 |
| 1782.....7 | 1815.....10 | 1850.....7 | 1882.....10 | 1915.....4 | 1950.....10 |
| 1783.....2 | 1816.....1 | 1851.....2 | 1883.....6 | 1916.....5 | 1951.....6 |
| 1784.....8 | 1817.....2 | 1852.....8 | 1884.....11 | 1917.....6 | 1952.....11 |
| 1785.....9 | 1818.....3 | 1853.....9 | 1885.....3 | 1918.....7 | 1953.....3 |
| 1786.....10 | 1819.....4 | 1854.....10 | 1886.....4 | 1919.....2 | 1954.....4 |
| 1787.....6 | 1820.....5 | 1855.....6 | 1887.....9 | 1920.....8 | 1955.....9 |
| 1788.....11 | 1821.....6 | 1856.....11 | 1888.....13 | 1921.....9 | 1956.....12 |
| 1789.....3 | 1822.....7 | 1857.....3 | 1889.....7 | 1922.....10 | 1957.....7 |
| 1790.....4 | 1823.....2 | 1858.....4 | 1890.....2 | 1923.....6 | 1958.....2 |
| 1791.....9 | 1824.....8 | 1859.....9 | 1891.....3 | 1924.....11 | 1959.....3 |
| 1792.....12 | 1825.....9 | 1860.....12 | 1892.....13 | 1925.....3 | 1960.....12 |
| 1793.....7 | 1826.....10 | 1861.....7 | 1893.....10 | 1926.....4 | 1961.....10 |
| 1794.....2 | 1827.....6 | 1862.....2 | 1894.....6 | 1927.....9 | 1962.....6 |
| 1795.....3 | 1828.....11 | 1863.....3 | 1895.....7 | 1928.....12 | 1963.....7 |
| 1796.....13 | 1829.....3 | 1864.....13 | 1896.....14 | 1929.....7 | 1964.....14 |
| 1797.....10 | 1830.....4 | 1865.....10 | 1897.....4 | 1930.....2 | 1965.....4 |
| 1798.....6 | 1831.....9 | 1866.....6 | 1898.....9 | 1931.....3 | 1966.....9 |
| 1799.....7 | 1832.....12 | 1867.....7 | 1899.....10 | 1932.....13 | 1967.....10 |
| 1800.....2 | 1833.....7 | 1868.....14 | 1900.....6 | 1933.....10 | 1968.....1 |
| 1801.....3 | 1834.....2 | 1869.....4 | 1901.....7 | 1934.....6 | 1969.....2 |
| 1802.....4 | 1835.....3 | 1870.....9 | 1902.....2 | 1935.....7 | 1970.....3 |
| 1803.....9 | 1836.....13 | 1871.....10 | 1903.....3 | 1936.....14 | 1971.....4 |
| 1804.....12 | 1837.....10 | 1872.....1 | 1904.....13 | 1937.....4 | 1972.....5 |
| 1805.....7 | 1838.....6 | 1873.....2 | 1905.....10 | 1938.....9 | 1973.....6 |
| 1806.....2 | 1839.....7 | 1874.....3 | 1906.....6 | 1939.....10 | 1974.....7 |
| 1807.....3 | 1840.....14 | 1875.....4 | 1907.....7 | 1940.....1 | 1975.....2 |
| 1808.....13 | 1841.....4 | 1876.....5 | 1908.....14 | 1941.....2 | 1976.....8 |
| | 1842.....9 | | | 1942.....3 | |
| | 1843.....10 | | | 1943.....4 | |

These calendars are reproduced by permission of J. L. Sweeney & Co., 51 Madison Avenue, New York City, who published and

copyrighted them in 1941. This company provides stenotype reporting service for all sorts of meetings.

CALENDAR No. 1

LEAP YEARS

1776 1844 1940
1816 1872 1968
1912

CALENDAR No. 2

COMMON YEARS

1777 1800 1823 1851 1879 1913
1783 1806 1834 1862 1890 1919
1794 1817 1845 1873 1902 1930
1941 1947 1958 1969 1975

CALENDAR No. 1 LEAP YEARS			CALENDAR No. 2 COMMON YEARS		
JANUARY	FEBRUARY	MARCH	JANUARY	FEBRUARY	MARCH
APRIL	MAY	JUNE	APRIL	MAY	JUNE
JULY	AUGUST	SEPTEMBER	JULY	AUGUST	SEPTEMBER
OCTOBER	NOVEMBER	DECEMBER	OCTOBER	NOVEMBER	DECEMBER

DAY NUMBER AND DECIMAL EQUIVALENT (NON-LEAP-YEARS ONLY)

JANUARY			MARCH			MAY			JULY			SEPTEMBER			NOVEMBER		
1	1	.003	1	60	.164	1	121	.332	1	182	.499	1	244	.668	1	305	.836
2	2	.005	2	61	.167	2	122	.334	2	183	.501	2	245	.671	2	306	.838
3	3	.008	3	62	.170	3	123	.337	3	184	.504	3	246	.674	3	307	.841
4	4	.011	4	63	.173	4	124	.340	4	185	.507	4	247	.677	4	308	.844
5	5	.014	5	64	.175	5	125	.342	5	186	.510	5	248	.679	5	309	.847
6	6	.016	6	65	.178	6	126	.345	6	187	.512	6	249	.682	6	310	.849
7	7	.019	7	66	.181	7	127	.348	7	188	.515	7	250	.685	7	311	.852
8	8	.022	8	67	.184	8	128	.351	8	189	.518	8	251	.688	8	312	.855
9	9	.025	9	68	.186	9	129	.353	9	190	.521	9	252	.690	9	313	.858
10	10	.027	10	69	.189	10	130	.356	10	191	.523	10	253	.693	10	314	.860
11	11	.030	11	70	.192	11	131	.359	11	192	.526	11	254	.696	11	315	.863
12	12	.033	12	71	.195	12	132	.362	12	193	.529	12	255	.699	12	316	.866
13	13	.036	13	72	.197	13	133	.364	13	194	.532	13	256	.701	13	317	.868
14	14	.038	14	73	.200	14	134	.367	14	195	.534	14	257	.704	14	318	.871
15	15	.041	15	74	.203	15	135	.370	15	196	.537	15	258	.707	15	319	.874
16	16	.044	16	75	.205	16	136	.373	16	197	.540	16	259	.710	16	320	.877
17	17	.047	17	76	.208	17	137	.375	17	198	.542	17	260	.712	17	321	.879
18	18	.049	18	77	.211	18	138	.378	18	199	.545	18	261	.715	18	322	.882
19	19	.052	19	78	.214	19	139	.381	19	200	.548	19	262	.718	19	323	.885
20	20	.055	20	79	.216	20	140	.384	20	201	.551	20	263	.721	20	324	.888
21	21	.058	21	80	.219	21	141	.386	21	202	.553	21	264	.723	21	325	.890
22	22	.063	22	81	.222	22	142	.389	22	203	.556	22	265	.726	22	326	.893
23	23	.063	23	82	.225	23	143	.392	23	204	.559	23	266	.729	23	327	.896
24	24	.066	24	83	.227	24	144	.395	24	205	.562	24	267	.732	24	328	.899
25	25	.068	25	84	.230	25	145	.397	25	206	.564	25	268	.734	25	329	.901
26	26	.071	26	85	.233	26	146	.400	26	207	.567	26	269	.737	26	330	.904
27	27	.074	27	86	.236	27	147	.403	27	208	.570	27	270	.740	27	331	.907
28	28	.077	28	87	.238	28	148	.405	28	209	.573	28	271	.742	28	332	.910
29	29	.079	29	88	.241	29	149	.408	29	210	.575	29	272	.745	29	333	.912
30	30	.082	30	89	.244	30	150	.411	30	211	.578	30	273	.748	30	334	.915
31	31	.085	31	90	.247	31	151	.414	31	212	.581	OCTOBER			DECEMBER		
FEBRUARY			APRIL			JUNE			AUGUST			1	274	.751	1	335	.918
1	32	.088	1	91	.249	1	152	.416	1	213	.584	2	275	.753	2	336	.921
2	33	.090	2	92	.252	2	153	.419	2	214	.586	3	276	.756	3	337	.923
3	34	.093	3	93	.255	3	154	.422	3	215	.589	4	277	.759	4	338	.926
4	35	.096	4	94	.258	4	155	.425	4	216	.592	5	278	.762	5	339	.929
5	36	.099	5	95	.260	5	156	.427	5	217	.595	6	279	.764	6	340	.932
6	37	.101	6	96	.263	6	157	.430	6	218	.598	7	280	.767	7	341	.934
7	38	.104	7	97	.266	7	158	.433	7	219	.600	8	281	.770	8	342	.937
8	39	.107	8	98	.268	8	159	.436	8	220	.603	9	282	.773	9	343	.940
9	40	.110	9	99	.271	9	160	.438	9	221	.605	10	283	.775	10	344	.942
10	41	.112	10	100	.274	10	161	.441	10	222	.608	11	284	.778	11	345	.945
11	42	.115	11	101	.277	11	162	.444	11	223	.611	12	285	.781	12	346	.948
12	43	.118	12	102	.279	12	163	.447	12	224	.614	13	286	.784	13	347	.951
13	44	.121	13	103	.282	13	164	.449	13	225	.616	14	287	.786	14	348	.953
14	45	.123	14	104	.285	14	165	.452	14	226	.619	15	288	.789	15	349	.956
15	46	.126	15	105	.288	15	166	.455	15	227	.622	16	289	.792	16	350	.959
16	47	.129	16	106	.290	16	167	.458	16	228	.625	17	290	.795	17	351	.962
17	48	.132	17	107	.293	17	168	.460	17	229	.627	18	291	.797	18	352	.964
18	49	.134	18	108	.296	18	169	.463	18	230	.630	19	292	.800	19	353	.967
19	50	.137	19	109	.299	19	170	.466	19	231	.633	20	293	.803	20	354	.970
20	51	.140	20	110	.301	20	171	.468	20	232	.636	21	294	.805	21	355	.973
21	52	.143	21	111	.304	21	172	.471	21	233	.638	22	295	.808	22	356	.975
22	53	.145	22	112	.307	22	173	.474	22	234	.641	23	296	.811	23	357	.978
23	54	.148	23	113	.310	23	174	.477	23	235	.644	24	297	.814	24	358	.981
24	55	.151	24	114	.312	24	175	.479	24	236	.647	25	298	.816	25	359	.984
25	56	.153	25	115	.315	25	176	.482	25	237	.649	26	299	.819	26	360	.986
26	57	.156	26	116	.318	26	177	.485	26	238	.652	27	300	.822	27	361	.989
27	58	.159	27	117	.321	27	178	.488	27	239	.655	28	301	.825	28	362	.992
28	59	.162	28	118	.323	28	179	.490	28	240	.658	29	302	.827	29	363	.995
			29	119	.326	29	180	.493	29	241	.660	30	303	.830	30	364	.997
			30	120	.329	30	181	.496	30	242	.663	31	304	.833	31	365	1.000
									31	243	.666						

STANDARD QUARTER-YEAR NUMBERS

A standard series of quarter-year numbers is given in the table below. Just as month numbers are almost indispensable in the cycle analysis of monthly data, so also quarter year numbers are of the greatest possible assistance in dealing with quarterly data.

The quarter year numbers that are used by the Foundation for the Study of Cycles are given in the table below. The fourth quarter in 1650 is base 0. In dealing with short series of figures you can, if you wish, subtract 1000 from each of the numbers starting with the fourth quarter of 1900.

You will notice that the number given for the fourth quarter of each year, starting 1901, is 1000 plus

four times the value of the last two digits of the year. Thus the number for the fourth quarter of 1911 is 4×11 or 44, 1000, or 1044.

Conversely, quarter number 1200 would represent the fourth quarter of 1950 ($1200 - 1000 = 200$; $200 \div 4 = 50$). Quarter number 1202 would be the second quarter of 1951 -two quarters after the fourth quarter of 1950 ($1202 - 1000 = 202$; $202 \div 4 = 50$ plus a remainder of 2).

Quarter numbers are needed for time charts, for periodic tables, and for a variety of other manipulations of quarterly data.

This system of quarter year numbers was developed by Alexander Malinowski.

YEAR	1st	2nd	3rd	4th	YEAR	1st	2nd	3rd	4th	YEAR	1st	2nd	3rd	4th
1650					1700	197	198	199	200	1750	397	398	399	400
1651	1	2	3	4	1701	201	202	203	204	1751	401	402	403	404
1652	5	6	7	8	1702	205	206	207	208	1752	405	406	407	408
1653	9	10	11	12	1703	209	210	211	212	1753	409	410	411	412
1654	13	14	15	16	1704	213	214	215	216	1754	413	414	415	416
1655	17	18	19	20	1705	217	218	219	220	1755	417	418	419	420
1656	21	22	23	24	1706	221	222	223	224	1756	421	422	423	424
1657	25	26	27	28	1707	225	226	227	228	1757	425	426	427	428
1658	29	30	31	32	1708	229	230	231	232	1758	429	430	431	432
1659	33	34	35	36	1709	233	234	235	236	1759	433	434	435	436
1660	37	38	39	40	1710	237	238	239	240	1760	437	438	439	440
1661	41	42	43	44	1711	241	242	243	244	1761	441	442	443	444
1662	45	46	47	48	1712	245	246	247	248	1762	445	446	447	448
1663	49	50	51	52	1713	249	250	251	252	1763	449	450	451	452
1664	53	54	55	56	1714	253	254	255	256	1764	453	454	455	456
1665	57	58	59	60	1715	257	258	259	260	1765	457	458	459	460
1666	61	62	63	64	1716	261	262	263	264	1766	461	462	463	464
1667	65	66	67	68	1717	265	266	267	268	1767	465	466	467	468
1668	69	70	71	72	1718	269	270	271	272	1768	469	470	471	472
1669	73	74	75	76	1719	273	274	275	276	1769	473	474	475	476
1670	77	78	79	80	1720	277	278	279	280	1770	477	478	479	480
1671	81	82	83	84	1721	281	282	283	284	1771	481	482	483	484
1672	85	86	87	88	1722	285	286	287	288	1772	485	486	487	488
1673	89	90	91	92	1723	289	290	291	292	1773	489	490	491	492
1674	93	94	95	96	1724	293	294	295	296	1774	493	494	495	496
1675	97	98	99	100	1725	297	298	299	300	1775	497	498	499	500
1676	101	102	103	104	1726	301	302	303	304	1776	501	502	503	504
1677	105	106	107	108	1727	305	306	307	308	1777	505	506	507	508
1678	109	110	111	112	1728	309	310	311	312	1778	509	510	511	512
1679	113	114	115	116	1729	313	314	315	316	1779	513	514	515	516
1680	117	118	119	120	1730	317	318	319	320	1780	517	518	519	520
1681	121	122	123	124	1731	321	322	323	324	1781	521	522	523	524
1682	125	126	127	128	1732	325	326	327	328	1782	525	526	527	528
1683	129	130	131	132	1733	329	330	331	332	1783	529	530	531	532
1684	133	134	135	136	1734	333	334	335	336	1784	533	534	535	536
1685	137	138	139	140	1735	337	338	339	340	1785	537	538	539	540
1686	141	142	143	144	1736	341	342	343	344	1786	541	542	543	544
1687	145	146	147	148	1737	345	346	347	348	1787	545	546	547	548
1688	149	150	151	152	1738	349	350	351	352	1788	549	550	551	552
1689	153	154	155	156	1739	353	354	355	356	1789	553	554	555	556
1690	157	158	159	160	1740	357	358	359	360	1790	557	558	559	560
1691	161	162	163	164	1741	361	362	363	364	1791	561	562	563	564
1692	165	166	167	168	1742	365	366	367	368	1792	565	566	567	568
1693	169	170	171	172	1743	369	370	371	372	1793	569	570	571	572
1694	173	174	175	176	1744	373	374	375	376	1794	573	574	575	576
1695	177	178	179	180	1745	377	378	379	380	1795	577	578	579	580
1696	181	182	183	184	1746	381	382	383	384	1796	581	582	583	584
1697	185	186	187	188	1747	385	386	387	388	1797	585	586	587	588
1698	189	190	191	192	1748	389	390	391	392	1798	589	590	591	592
1699	193	194	195	196	1749	393	394	395	396	1799	593	594	595	596

STANDARD QUARTER-YEAR NUMBERS—CONTINUED

YEAR	1st	2nd	3rd	4th	YEAR	1st	2nd	3rd	4th	YEAR	1st	2nd	3rd	4th
1800	597	598	599	600	1860	837	838	839	840	1920	1077	1078	1079	1080
1801	601	602	603	604	1861	841	842	843	844	1921	1081	1082	1083	1084
1802	605	606	607	608	1862	845	846	847	848	1922	1085	1086	1087	1088
1803	609	610	611	612	1863	849	850	851	852	1923	1089	1090	1091	1092
1804	613	614	615	616	1864	853	854	855	856	1924	1093	1094	1095	1096
1805	617	618	619	620	1865	857	858	859	860	1925	1097	1098	1099	1100
1806	621	622	623	624	1866	861	862	863	864	1926	1101	1102	1103	1104
1807	625	626	627	628	1867	865	866	867	868	1927	1105	1106	1107	1108
1808	629	630	631	632	1868	869	870	871	872	1928	1109	1110	1111	1112
1809	633	634	635	636	1869	873	874	875	876	1929	1113	1114	1115	1116
1810	637	638	639	640	1870	877	878	879	880	1930	1117	1118	1119	1120
1811	641	642	643	644	1871	881	882	883	884	1931	1121	1122	1123	1124
1812	645	646	647	648	1872	885	886	887	888	1932	1125	1126	1127	1128
1813	649	650	651	652	1873	889	890	891	892	1933	1129	1130	1131	1132
1814	653	654	655	656	1874	893	894	895	896	1934	1133	1134	1135	1136
1815	657	658	659	660	1875	897	898	899	900	1935	1137	1138	1139	1140
1816	661	662	663	664	1876	901	902	903	904	1936	1141	1142	1143	1144
1817	665	666	667	668	1877	905	906	907	908	1937	1145	1146	1147	1148
1818	669	670	671	672	1878	909	910	911	912	1938	1149	1150	1151	1152
1819	673	674	675	676	1879	913	914	915	916	1939	1153	1154	1155	1156
1820	677	678	679	680	1880	917	918	919	920	1940	1157	1158	1159	1160
1821	681	682	683	684	1881	921	922	923	924	1941	1161	1162	1163	1164
1822	685	686	687	688	1882	925	926	927	928	1942	1165	1166	1167	1168
1823	689	690	691	692	1883	929	930	931	932	1943	1169	1170	1171	1172
1824	693	694	695	696	1884	933	934	935	936	1944	1173	1174	1175	1176
1825	697	698	699	700	1885	937	938	939	940	1945	1177	1178	1179	1180
1826	701	702	703	704	1886	941	942	943	944	1946	1181	1182	1183	1184
1827	705	706	707	708	1887	945	946	947	948	1947	1185	1186	1187	1188
1828	709	710	711	712	1888	949	950	951	952	1948	1189	1190	1191	1192
1829	713	714	715	716	1889	953	954	955	956	1949	1193	1194	1195	1196
1830	717	718	719	720	1890	957	958	959	960	1950	1197	1198	1199	1200
1831	721	722	723	724	1891	961	962	963	964	1951	1201	1202	1203	1204
1832	725	726	727	728	1892	965	966	967	968	1952	1205	1206	1207	1208
1833	729	730	731	732	1893	969	970	971	972	1953	1209	1210	1211	1212
1834	733	734	735	736	1894	973	974	975	976	1954	1213	1214	1215	1216
1835	737	738	739	740	1895	977	978	979	980	1955	1217	1218	1219	1220
1836	741	742	743	744	1896	981	982	983	984	1956	1221	1222	1223	1224
1837	745	746	747	748	1897	985	986	987	988	1957	1225	1226	1227	1228
1838	749	750	751	752	1898	989	990	991	992	1958	1229	1230	1231	1232
1839	753	754	755	756	1899	993	994	995	996	1959	1233	1234	1235	1236
1840	757	758	759	760	1900	997	998	999	1000	1960	1237	1238	1239	1240
1841	761	762	763	764	1901	1001	1002	1003	1004	1961	1241	1242	1243	1244
1842	765	766	767	768	1902	1005	1006	1007	1008	1962	1245	1246	1247	1248
1843	769	770	771	772	1903	1009	1010	1011	1012	1963	1249	1250	1251	1252
1844	773	774	775	776	1904	1013	1014	1015	1016	1964	1253	1254	1255	1256
1845	777	778	779	780	1905	1017	1018	1019	1020	1965	1257	1258	1259	1260
1846	781	782	783	784	1906	1021	1022	1023	1024	1966	1261	1262	1263	1264
1847	785	786	787	788	1907	1025	1026	1027	1028	1967	1265	1266	1267	1268
1848	789	790	791	792	1908	1029	1030	1031	1032	1968	1269	1270	1271	1272
1849	793	794	795	796	1909	1033	1034	1035	1036	1969	1273	1274	1275	1276
1850	797	798	799	800	1910	1037	1038	1039	1040	1970	1277	1278	1279	1280
1851	801	802	803	804	1911	1041	1042	1043	1044	1971	1281	1282	1283	1284
1852	805	806	807	808	1912	1045	1046	1047	1048	1972	1285	1286	1287	1288
1853	809	810	811	812	1913	1049	1050	1051	1052	1973	1289	1290	1291	1292
1854	813	814	815	816	1914	1053	1054	1055	1056	1974	1293	1294	1295	1296
1855	817	818	819	820	1915	1057	1058	1059	1060	1975	1297	1298	1299	1300
1856	821	822	823	824	1916	1061	1062	1063	1064	1976	1301	1302	1303	1304
1857	825	826	827	828	1917	1065	1066	1067	1068	1977	1305	1306	1307	1308
1858	829	830	831	832	1918	1069	1070	1071	1072	1978	1309	1310	1311	1312
1859	833	834	835	836	1919	1073	1074	1075	1076	1979	1313	1314	1315	1316

IF YOU LIKED THIS COURSE, YOU WOULD ENJOY:

WHEELS WITHIN WHEELS
THE ART OF FORECASTING FINANCIAL MARKET CYCLES

BY DANIEL T. FERRERA

We are happy to announce the release of a new course, by Dan Ferrera, *Wheels Within Wheels: The Art of Forecasting Financial Market Cycles*.

In this course, Dan breaks down the 16 primary cycles of the Dow Jones Averages, and combines them in Excel spreadsheets to create a composite wave which very closely reproduces the last 100 years of market activity (see chart below). He explains all cycle lengths, some possible correlations, but most importantly projects them 100 years into the future with the DTF Barometer to give a clear vision of the next 100 years of the Dow Jones Averages.

For further details, see contents, 1900-2000 Composite, and reviews below. The book is hardcover and price is \$450.00.

TABLE OF CONTENTS:

PART I - Special Stock Market Cycle Report

Author's Introduction

The 18-Year Super Bull & Bear Market Cycle

The Big Picture

A Closer Look At Cycles

The 42-Year Cycle

Interest Rates

The Economy

The January Effect

2002- 2102 Major Trend Cycle Composite Forecast

PART II – Special Stock Market Cycle Report

Author's Introduction

What is a Cycle?

The New Era

The Four Primary Intermediate Cycles

W.D. Gann's Stock Market Patterns

The 10 & 9 Year Cycles

The Shorter Cycles

Putting Them All Together

S&P 100 Year Projection Using #1 & #2 Dominant Cycles

Follow The Yellow Brick Road

Part III – The DTF Long Term Stock Market Barometer

16 Cycle Composite Barometer

Is Timing The Market Worth The Effort?

The 54-Year & 12-Year Cycles In Bond Yields

Cycles In Gold

Stock Market Cycle Charts

Appendices

Appendix 1 - Garrett Torque Analysis Example

Appendix 2 – How To Create A Composite Cycle

Appendix 3 – Vectors & Phase: What is a Vector?

Appendix 4 – Understanding Cycles

Appendix 5 – Wyler's Theoretical Considerations

Appendix 6 – Dewey's Cycles In The Stock Market

Appendix 7 – Cogan's Rhythmic Cycles

Appendix 8 - Chase's Economic Time

Appendix 9 – Wood's Stock Market Time Cycles

Appendix 10 – Martin's Trend Action

Appendix 11 – Weston's Geometrical Chart System

Appendix 12 – Bibliography & Recommended Reading

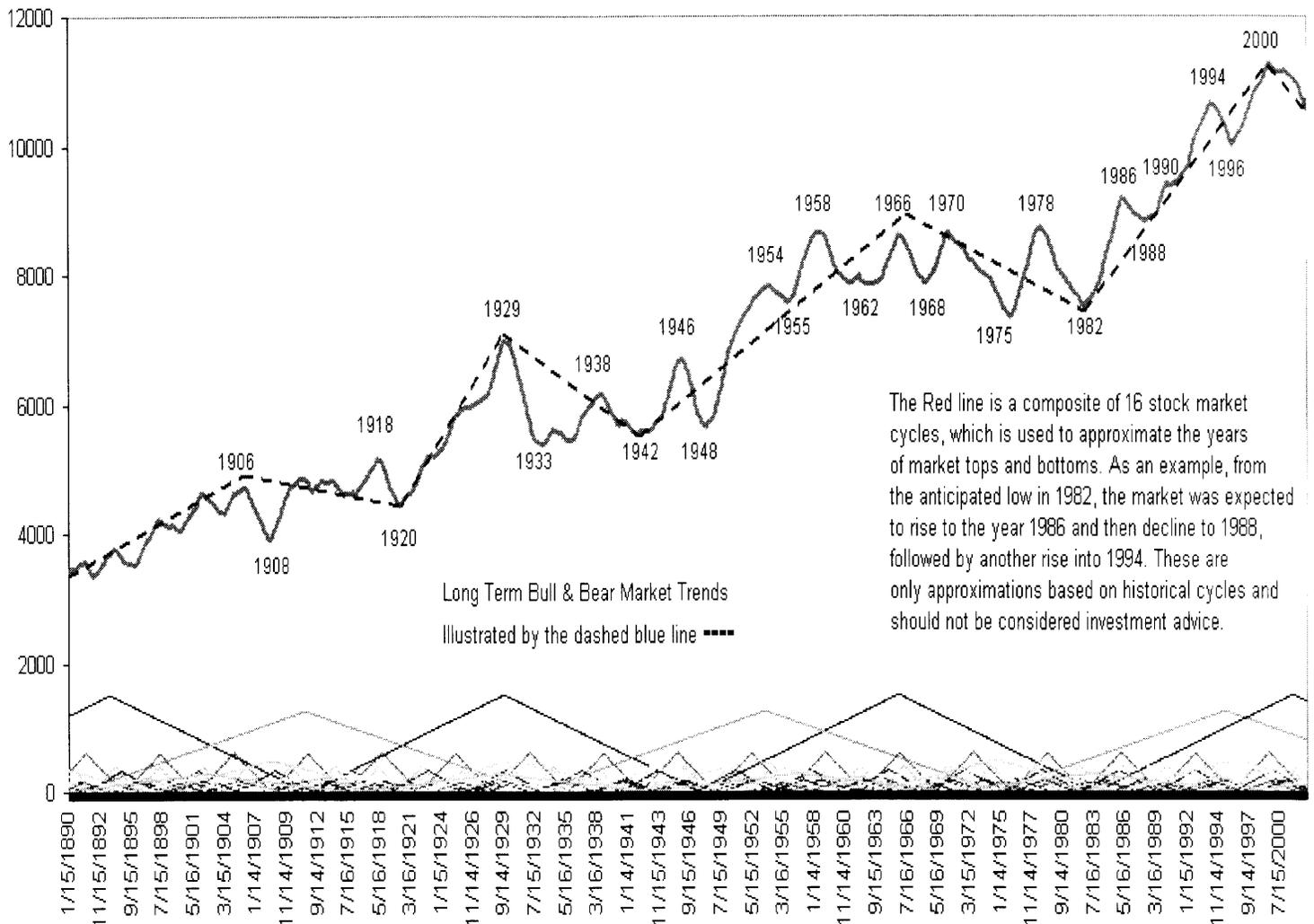
2002, 230p. Numerous Charts & Diagrams. Includes CD ROM with all Excel Spreadsheets with all cycle calculations and charts, and the 100 year projection DTF Barometer. Price \$450.00

TO ORDER *Wheels Within Wheels*: <http://www.sacredscience.com/Ferrera>

FIRST REVIEWS OF THE ORIGINAL 12 PAGE CYCLE REPORT, PART 1 OF THIS COMPLETE COURSE:

Having studied and used cycles in the stock market for some 32 years now, I have come to appreciate their value and consider the study of economic cycles the only valuable tool the long-term investor really needs. Because of this, I was interested in reading Daniel Ferrera's new "Special Stock Market Cycle Report" to see if he could shed some light on the economic outlook for the coming years and if it differed from my own views. Dan's report basically explains the long term "Super" bull and bear market cycles and breaks down their subcycles with examples from the past 100 years and then forecasts them 100 years into the future. Most investors would be quite surprised to learn what these cycles suggest for the coming decade and the next two to four years in particular. A knowledge of such major highs and lows is instrumental to wealth creation and I believe that the Rothschilds of Europe specifically stated that they accumulated all of their wealth by simply following the 41-42 month cycle of economic activity which worked for their families for over a century! Dan's study pinpoints the big highs and lows that come from very regular and dependable cycles and if you are a long term investor or mutual fund owner you

DTF Long Term Stock Market Barometer a Composite of 16 Cycles



will certainly want to know when these "once in a lifetime" opportunities come for stock investing. This report also mentions the more frequent short term cycles of economic activity that can act as a guidepost to the outcomes forecasted by the master long term cycles. If you invest in the market with any long-term funds you will need to know the information in this report. It's presented as a fairly basic analysis that will serve as a stepping stone to more sophisticated cycle analysis but for the average investor if you don't know these basic fundamental cycles you will be at a significant disadvantage in the investment arena. For the rather modest cost of this report, I feel it is an investment in the future well worth making.

Michael S. Jenkins, Stock Cycles Forecast

"Mr. Ferrera has put together a very unique stock market report that clearly shows two dominant long term cycle patterns that have predicted every major Bull & Bear Market Trend for the past century. He then projects this pattern 100 years into the future. I would highly recommend this report to anyone that invests in the US Stock Markets".

Bonnie Lee Hill, Dallas, Texas

Long-term investing through "Buy & Hold" philosophy can be an excellent strategy for accumulating significant wealth in the stock market, but that strategy and the length of the holding period must be based on the specific cyclic action of the market, not some rigid, "never sell" approach which refuses to adjust to the changes in the market. If you bought for the long-term in 1928 and failed to sell in early October 1929, it took you until 1953 just to break even, and that's assuming the stocks you bought were even in business 25 years later. Bought for the long-term in 1966 and held? It took you a full 16 years until 1982 to break even ignoring the horrible economic inflation our country experienced . Mr. Ferrera's report clearly shows how and when these long term investment opportunities present themselves with both historical charts and future projections all the way out to the year 2108. I believe its the best investment I have ever made. In my opinion, the price should be much higher. *Dr. V. Sekulov*

Mr. Ferrera, who has written several magazine articles for us, has put together a unique stock market report that clearly shows how two dominant long-term cycle patterns have predicted every major Bull & Bear Market for the past century. Mr. Ferrera then graphically projects this cyclic model 16 years into the future and then describes how the stock market is likely to unfold over the next 100-years! In all my years at Tradersworld Magazine, I have never seen anything like this report! This information is absolutely invaluable for anyone that invests in the equity markets, whether it's on their own or through a company retirement plan. You Can See It Too... In this report, you will literally "see" how and why the markets crashed in 1929 and then again in 1974. You will understand why the market basically traded sideways from 1932 to 1947 and 1974 to 1982. You will see why the stock markets topped in the year 2000 and what they are most likely to do until the year 2018. *Larry Jacobs, Publisher, Trader's World Magazine*

TO ORDER *Wheels Within Wheels*:
<http://www.sacredscience.com/ferrera>

SACRED SCIENCE INSTITUTE
Web: www.sacredscience.com
Email: institute@sacredscience.com
PO Box 3617
Idyllwild, CA 92549-3617
Vox: (909) 659-8181
Fax: (909) 659-8484

IF YOU LIKED THIS COURSE, YOU WOULD ENJOY:

THE GANN PYRAMID
SQUARE OF NINE ESSENTIALS

BY DANIEL T. FERRERA

The Sacred Science Institute is proud to announce the release of a new groundbreaking course on the Square Of Nine, W. D. Gann's most mysterious calculator. This course is full of never before seen principles and techniques of analysis using Gann's Square of 9. It contains explanations of Gann's complicated theories and the principles upon which they are based, and gives clear market examples which any trader can immediately apply and integrate into his trading system. We are confident that this course will provide any reader with insights into Gann theory and trading applications which they have never seen presented in any other writings on Gann Analysis!

Introduction	P-2
Navigating With the Square of Nine	P-7
Bible Interpretations Related to W. D. Gann	P-11
What Gann Said About the Square of Nine	P-15
Six Squares of Nine	P-16
Square of Nine Time Applications	P-19
Price Targets For Support & Resistance	P-23
Using A Square of Nine Table	P-25
Time As a Price & Price as a Time	P-28
Gann Angle Projection	P-30
Square of Nine Time Techniques, A Different Look at History	P-33
Analyzing Markets	P-39
Nine Rules For The Square of Nine	P-40
PERIODIC NUMBER CYCLES	P-42
Price as a Time Period	P-45
Price Levels For Support & Resistance	P-47
Converting Astronomical Longitude to Price	P-49
ANOTHER ASTRONOMICAL TECHNIQUE	P-55
Fibonacci Ratios	P-60
Conclusion	P-62
W. D. Gann Calculators	P-63

AVAILABLE THROUGH THE SACRED SCIENCE INSTITUTE
(800) 756-6141 – WWW.SACREDSOURCE.COM/FERRERA

IF YOU LIKED THIS COURSE, YOU WOULD ENJOY:

THE MYSTERIES OF GANN
ANALYSIS UNVEILED!

BY DANIEL T. FERRERA

The Sacred Science Institute is proud to announce the release of a new course presenting the most detailed explanation of Gann Theory & Application ever before released to the public. Covering in detail a dozen of Gann's most difficult analysis techniques and theories, this course will advance the general reader to levels far beyond most Gann "experts" today. This course will provide any reader with deep insights into Gann's theories and valuable trading applications which have never been presented in any previous writings on Gann Analysis!

The Astrological Secret Of Gann Angles	Page 1-3
Analysis Of The Coffee Letter & Planetary Vectors Or Angles	Page 3-12
The Cosmology Of 17 Years	Page 12-13
Squaring Price With Time	Page 14-23
Forecasting With Planetary Cycles	Page 23-27
The 37 Year Cycle Pattern In The Dow Jones Industrial Average	Page 28-31
Important Formulas And Techniques For Planetary Cycles	Page 32-33
Three Term Proportion Of Planetary Longitudes	Page 34-36
Gann's CE Average, MOF Formula & Master Charts	Page 37-39
Periodic Number Cycles	Page 40-44
Support & Resistance Techniques From The Square Of 9	Page 44-50
Converting Planetary Longitude To Price	Page 50-51
Converting A Horoscope Into A Price Calculator	Page 52
Gann's Master Mathematical Formula For Market Predictions	Page 53-60
Mass Pressure Forecasting Technique	Page 61-66
Forecasting The Stock Market With Cycles	Page 66-73
Gann's Permanent Charts	Page 74-81
Gann's Base Ten Method	Page 82-84
Balancing Solar Longitude With Price On The Square Of 9	Page 85-86
Tunnel Thru The Air	Page 87-94
Soybean Letter To Private Student	Page 94-98
Market Volume	Page 99-101
Conclusion	Page 102

Appendix A Coffee Letter References

W. D. Gann May Coffee Santos D
Coffee Charts, Horoscopes, & Calculations

Appendix B Geometrical Angles

W. D. Gann The Basis of My Forecasting Method - Geometrical Angles
W. D. Gann The Basis of My Forecasting Method For Grains
W. D. Gann Grains Scale of Prices
W. D. Gann Charts & Demonstrations

Appendix C Time Cycles

W. D. Gann Forecasting & The Master Time Factor
How To Create A Composite Cycle
Astronomical Cycles & The 37 Year William's Cycle
Gann's Great Mutations Charts
Ludwig Larson Ages & Cycles of Time
George Bayer & Cycle Interpretation
Heliocentric Moves

W. D. Gann Cash & May Soybeans Futures
Planetary Reference Sheets & Tables
Sepharial The Arcana or Stock & Share Key

Appendix D Soybean Letter References

W. D. Gann Soybeans Price Resistance Levels
Active Angle References
Soybean Chart & Horoscopes

Appendix E Master Calculator

W. D. Gann Master Calculator for Weekly Time Periods
W. D. Gann Mathematical Formula For Market Predictions

Appendix F Master Charts

W. D. Gann Master Charts
Studies & Examples

Appendix G Market Volume

Commentaries on Market Volume
W. D. Gann Market Trends, The Volume Rule - Unpublished Manuscript
W. D. Gann Form Reading
Ted Warren The Four Basic Phases / Cycles of Stock Prices
W. D. Gann Trading Rules
The Ticker & Investment Digest 1909 Gann Interview

Computer Programs Included

Excel - Cycle Calculator
Excel - W. D. Gann Mass Pressure Calculator For Dow 30
Excel - Mathematical Formula For Market Predictions Calculator Overlay
Excel - Time Calculator
Excel - 2 Square of Nine Calculators
Program - New Planet - Calculates Planetary Positions By Degree Progression
Program - Cyclekt - Wave Mechanics Program Creating Summational Waves

AVAILABLE THROUGH THE SACRED SCIENCE INSTITUTE
(800) 756-6141 - WWW.SACREDSOURCE.COM/FERRERA

IF YOU LIKED THIS COURSE, YOU WOULD ENJOY:

STUDIES IN ASTROLOGICAL
BIBLE INTERPRETATION

BY DANIEL T. FERRERA

The Sacred Science Institute is proud to announce the release of a new collection of Studies In Astrological Bible Interpretation, by Daniel Ferrera. This work is an interesting exploration of the process used in coding astrological and astronomical cycles into literature. It presents a detailed analysis of the book of Genesis, exploring means and systems through which astrological symbolism is veiled. Beginning with the theories of George Bayer, Ludwig Larson and others, Ferrera leads the reader through the thought process & methodology to begin decoding works like the Bible.

CONTENTS

Study of George Bayer's Bible Interpretation

A Study of Ludwig Larson's Key to the Bible & Heaven

A Study of David Fideler's Jesus Christ Sun of God

Revelations Revisited

Bible Interpretation Related to W. D. Gann

666 The Number of the Beast

A Study of the Book of Genesis

The Number 12; The Great Flood

Astrological Analysis of Astrological Codes of Genesis

Noah & His Sons

The Complete Book of Genesis is Broken Down Into Astrological Symbolism

PRICE \$55.55

FOR MORE DETAILED INFORMATION ON THIS WORK, SEE THIS LINK:

[WWW.SACREDSOURCE.COM /FERRERA](http://WWW.SACREDSOURCE.COM/FERRERA)

SACRED SCIENCE INSTITUTE CYCLE ANALYSIS REFERENCE LIBRARY

"Gann Harmony" The Law of Vibration: The Complete Gann I-IX Course Manuals
Compiled By Dr. Jerome Baumring With Notes On W. D. Gann's Hidden Material: The Complete Gann I-IX Lecture Notes by Julius J. Nirenstein 1986-1989 Nine Volumes & 250p. of Lecture Notes. The Investment Centre Stock & Commodity Market Forecasting Courses: A Distillation Of The Wisdom & Insights of W. D. Gann. The Nine Gann Course Manuals Compiled By Dr. Baumring Containing His Selection of Excerpts of the Clearest Presentations of the Primary Conceptual Material Necessary For Understanding The Law of Vibration as Taught by W. D. Gann. Also Including the Complete Set of Lecture Notes Which Present A Detailed Record of Dr. Baumring's Teachings, Theories, Diagrams & Market Applications as Presented at the Investment Centre Seminars. This is an Extremely Challenging Series of Courses Requiring a Long Term Commitment to Research, Study & Analysis. This Course Presents the Explanation of the Basis of a Natural & Holistic Universal Cosmology, The Law of Vibration, Developing an Understanding of the Laws of Cause & Effect in the Universe, & Their Manifestations on the Various Planes of Consciousness. For Detailed Contents Please View The Listings for the Individual Manuals & Lecture Notes In the Gann & Baumring Category Or See the Various Baumring Information in the Financial Market Forecasting Section of the Home Page. The Bulk Purchase of The Complete Series of Course Manuals & Lecture Notes Together Includes a \$900.00 Discount. **CAT#057 \$3,600.00 Limited Time 50% Discount \$1,800.00**

Seven Studies in Stock Market Trading. M. V. Woods. 1943 An Original & Important Explanation of the Real Meaning of Periodicity, Regularly Referred to by Baumring in his Teachings as one of the Clearest Presentations of this Complicated & Misunderstood Principle. Contents: Stock Market Time-Cycles: A Knowledge Derived From The Past Makes Possible the Forecasts of Future Trends In the Affairs of Man; Major Time-Cycles; Four Stages of a Complete Stock Market Cycle; 50 Years of Stock Market Cycles; Number of Primary Swings In Bull & Bear Markets; Secondary Stock Market Cycles; Normal Reaction Rule; An Analysis of Intermediate Price Trends; Occurrence of Weekly Sequences In the Stock Market; Simple Method of Keeping Records of resistance Points & Areas of Supply & Demand for Estimating Future Price Objectives; DJIA Cycle Combination & Projection; 14, 45, 54, 18, 9 Year Variable Cycles; Variable & Fixed Cycles; Streamlining the Trends; a Study in Price Objectives; Four Types of Gaps; Measuring Price Objective. **CAT#073 \$77.77**

Wyler Series On Stock Market Speculation: Vol.1 The Application Of Scientific Principles To Stock Speculation. Vol.2 Trading And Trending. Joseph A. Wyler. 174p. & 215p. This Series By A Consulting Chemist & Chemical Engineer Gives An Analysis Of The Markets From The Perspective Of The Laws Of Physics. Baumring Used This Series As A Fundamental Presentation Of Gann Theory, To Show That The Markets Are Governed By The Measurable Laws Quantifiable By The Terminology & Equations Of Newtonian Mechanics. Contents: Volume I General Principles; Volume; Mass; Velocity; Momentum; Kinetic Energy; $K=1/2MV$ Squared; Work Done; Acceleration; Force; Power; Critical Volume; Consistent Move; Limited Maximum Energy Level; Reversal Point; Tertiary Move; Secondary Move; Primary Move Basic Calculated Factors & Helpful Concepts; Basic Stock Price Structures; Strategic Formations; Theoretical Considerations; Sayings & Proverbs. Volume II General Principles For Trading & Trending; Trading; Trending; Interpretation Of Geometrical Patterns & Combinations Of Patterns. **CAT#077 \$88.88**

An Introduction to Trend - Action: A Scientific Method of Forecasting. Richard Martin. 1943 Many Illustrations. An Excellent book on Forecasting by the Determination of Trends and Pattern Recognition Recommended by Baumring. Contents: 5 Elements; Basic Form & Sequence; Structure of Channel; Channel as Unit; The Correction; Long Move of the Channel; Angle Patterns; Types of Corrections; Proportion; Classification; Accumulation & Distribution; Individual Issues; Recent Major Bottoms. **CAT#090 \$55.55**

Benner's Prophecies Of Future Ups and Downs in Prices. Samuel Benner, An Ohio Farmer 1879 131p. What Years To Make Money On Pig-Iron, Hogs, Corn, & Provisions. "I Know of No Way of Judging the Future But by the Past" -Patrick Henry; "There is a Time in the Price of Certain Products and Commodities, Which, If Taken by Men at the Advance, Leads on to Fortune; And if Taken at the Decline Leads To Ruin."; This Is One of The First Known Books on Forecasting The Financial Markets, Loaded With Excellent Insights & Some of the First & Best Research on Cycle & Panic Theory & The Causative Forces Behind Them. A Classic For Anyone Interested In Forecasting. Contents: Predictions; Pig-Iron; Hogs; Corn; Cotton; Provisions; Panic; Theory; Conclusions. Includes: Statistics; Panics; Joseph & Egyptian Weather Statistics; "The Writer Does Claim A "Cast Iron Rule" That Future Ups & Downs of the Markets, and High & Low Prices In Certain Products & Commodities, Can Be Calculated For Some Years To Come With As Much Certainty And Upon The Same Principle That An Astronomer Calculates an Eclipse of the Sun"; "God Is In The Prices"; Do Weather Records Give The Rule?; Probabilities; Cause & Effect; Do Production Statistics Give The Rule?; The Future Cannot Be Calculated Upon By Agricultural Statistics; Does Price Give The Rule?; Periodicity In Cycles; Cycles In Yearly Price Averages Give Us The Rule; "Cast Iron Rule" = "One Extreme Invariable Follows Another"; Attractive & Repulsive Forces of Magnet; System of Prophecy; Epochs of Abundance & Scarcity; Pig-Iron Statistics Yearly Averages; "War, Panic & Elections do Not Change the General Course of Prices in Cycles"; 7 year Cycle; "History Will Repeat Itself"; Analysis of Pig-Iron Cycles 1834 - 1899; Cycles In Increasing & Decreasing Series Arithmetical Progressions; Axioms of Price Action; Ratios of Increase & Decline; Hog Cycles 1836 - 1891: 5, 6, 11 Year Cycles; Corn Cycles; Weather & Atmospheric Currents; Predictions of a "Financial Catastrophe"; Wall Street Stocks; Disasters & Vibration; Panic Cycles 1819 - 1891; 16, 18, 20, 54 Year Cycles; "Blue Mondays" & "Black Fridays"; Cause & Effect; 5, 6, 11, 27 Year Panic Cycles; Laws of Nature; Astronomical Exactness; Signs of the Times; Theory: Periodicity In Price Cycles; Causes Found In Solar System; Meteorological Cycle; Disturbances At Planetary Equinoxes; Electric & Magnetic Storms; Vulcan, Mercury, Venus, Earth, Mars, Jupiter, Saturn; Sun-Spots; Telluric & Atmospheric Disturbances; Jovial Cycle; 11, 27, 54 Year Cycles; Herschel & Leverrier; Mythology; Ancient Astrology; Precession of Equinoxes; 25,000 & 12,000 Year Cycles; Deluge of Moses; Astronomers & Galileo. **CAT#062 \$65.00**

The Collected Writings Of W. D. Gann, Volume II: The Master Time Factor: No. 3 Master Forecasting Method & Stock Market Forecasting Courses. William Delbert Gann 1921-1954 220p. This course contains one of two of Gann's greatest courses, the Master Time Factor Course. We know he considered it his most important course, by his original 1939 price being \$2,500.00. This course has remained unavailable since the time Gann sold it himself. Included with it are a number of further rare Stock Forecasting Courses which have been almost unknown until this time. Contents: No. 3 Master Forecasting Method; Learn Before You Lose Or Why You Lose Money On Stocks & How To Make Profits; Form Reading And Rules For Determining Trend Of Stocks; Resistance Levels; Volume Of Sales; Master Time Factor & Forecasting By Mathematical Rules -This Is One Of Gann's Two Most Important, And Previously Unpublished Courses Covering The Following Rare Sections: Forecasting, Great Cycle - Master Time Factor, Bull & Bear Calendar Years, How To Make Annual Forecasts, Mater 20-Year Forecasting Chart, 1929 & 1936 Yearly Forecasts, NYSE Permanent Chart; Enhanced Master Charts: Master "12" Chart - Square Of 9 - Six Squares Of 9 - 2 Hexagon Charts - Master Chart Of 360- Mater 360 - Circle Chart Squared - Spiral Chart - NYSE Permanent Chart - Us Steel Name Chart - US Permanent Chart - Price & Time Spiral Charts - Hourly Spiral Chart - Square Of 4 - May Soy Bean Master Chart - Mater Egg Chart - Coffee Rio Conic Chart - May Wheat Geometric Chart - Even Squares - Gann Scientific Forecast - May Soy Beans; Further Unpublished Forecasting Courses: Method For Forecasting The Stock Market; How To Forecast; The Basis Of My Forecasting Method; Forecasting By Time Cycles; Auburn Motors; Time & Price Resistance Levels; How To Sell Puts & Calls. **CAT#059 \$300.00**

The Long Waves In Economic Life. Nikolai D. Kondratieff. 1935 The Famous Russian work on Long Economic Cycles & the Well Known Kondratieff Wave, Including 25 Year & 60 Year Cycles. Contents: Intro; Method; Wholesale Price Level; Index Numbers For Commodities; Rate of Interest; Wages 7 Foreign Trade; Wages in England; Production & Consumption; Other Series; Statistical findings; First, Second, & Third Long Waves; Empirical Characteristics; Nature of Long Waves; Conclusions. **33.33**

Forecasting The New York Stock Market

Professor Weston 1921 50 pages With Detailed Charts & Diagrams. An Extremely Rare & Important Technical Presentation of Astrological Cycle Theory & Fourier Analysis. From Title: Being A Treatise On The Geometrical Or Chart System Of Forecasting In Which Is Explained The Principles Of The Art, And Giving A Demonstration With The Price Curve Of Potatoes In The U. S. Contents: Banking & Pools; Cycles; Fourier Sequence; Cyclical Phenomenon; Fourier Equations; Cycle As Series Of Recurring Events; Linear Equations; Divisions Of Circle; Properties Of Circles; How To Construct Cycles; Geometrical Construction Of Cyclical Phenomena; Harmonics & Multipliers; Forecasting The Stock Market; 10 Year Cycle; Planetary Causes; Forecast Curve; Secondary Cycle; The System; Influence Of Jupiter & Saturn; Mercury In Stock Forecasting; 22 Day Cycles; 4 Month Cycles; 10 Year Cycle Of NYSE; Smoothed Forecast Curve; Cyclic Periods Of Finance; Fourier Chart Of Market. **CAT#234 \$77.77**

Collected Works of Henry Ludwell Moore

Economic Cycles Their Law & Cause

Generating Economic Cycles

Forecasting The Yield of Cotton

Henry Ludwell Moore 1914, 114p.; 1917, 173p.; 1923, 141p. This set of Excellent Works by the Professor of Political Economy In Columbia University was one of Dr. Baumring's Top Recommendations in the Field of Financial Market Forecasting. Contents: Volume I Generating Cycles of Products & Prices; A Century of Prices; Crop Cycles; Origin of 8 Year Generating Cycle; Economic Cycles; Meteorological Cycles; Physical Cause of 8 Year Generating Cycle; Theories of Sun; Influence of New Physics; Role of Venus. Volume II Causes of Rainfall; Fourier's Theorem; Equation of Rainfall; Rainfall & Crops; Secular Trend; Critical Periods of Growth; Yield Cycles; Theories of Demand; Statistical Laws of Demand; Prediction of Prices; Elasticity of Demand; Mechanism of Cycles; Fundamental Persistent Cause of Economic Cycles. Volume III Mathematics of Correlation; Frequency Distribution; Standard Deviation as Measure of Dispersion; Fitting Straight Lines to Data; Coefficient of Correlation; Government Crop Reports; Forecasting the Yield of Cotton From Crop Reports; Law of Demand For Cotton; Statistics; Complete Solution. **CAT#076 \$88.88**

"Money" Investing in Stocks, Trading In Commodities, Or The Time Factors In The Stock

Market. George Bayer 1937 73p. Foldout Chart & Numerous Diagrams & Charts. This is one of Bayer's rare early courses containing the most detailed presentation of the method of applying the ellipse and astrological principles to the markets. Contents: Philosophical Thoughts; What Do We Mean By Time?; About Religions; Motions In The Universe; Some Fundamentals Of Astronomy; Extension Of Astronomic Laws; The Stock Market, One Of The Minute Wheels Of The Universe; "Quack, Quack" About The Market; Biblical Interpretation; Market Vibrations; Mechanical Vs. Teleological Conceptions Of Market; Solar Energetic Forces; Planetary Forces; Astrological Methods & Applications; Gap Indications; Point Of Rotation; Force Intensity; Bayer Ellipse; Quadrature Of The Circle; Ellipse Method #3; Detailed Discussion Of Uses Of Ellipses & Controlling Circles; Construction Of Ellipse In Market; Conic Sections; Astrological Proofs From Bible; Tribes & Time Cycles; Angle Method #4; Method #5: Planetary Influences On Numbers; House Rulerships; Quadrants; Table Of Planetary Numbers; Planetary Stock Numbers; Attraction & Repulsion Of Planets; Detecting The Changes Of Trend By Means Of Critical Degrees; Wheat Examples. Bayer's Services. **CAT#231 \$55.55**

Stock & Commodity Traders' Hand-Book of Trend Determination. Secrets of Forecasting Values, Especially Commodities, Including Stocks. George Bayer. 1940. 51p. This is Bayer's latest work which is directly focused upon giving a set of clearly defined trading rules for traders to apply, using his astrological indicators and ellipse. Contents: The Foundation Upon Which We Build Our Rules of Forecasting Movements of Commodities & Stocks; Additional Fundamentals; What The Ancients Knew; Charts; Trading In Commodities; Astronomy For Traders; Rules For Trading In Wheat, Hides & Stocks; 11 Rules For Trading In Hides or Stocks; Rules For Cotton, Lard and Stocks. Declination, Heliocentric; Direct Motion of Planets; 80 Year Cycles; Rules and Use of Ellipse; Latitude & Longitude both Heliocentrically & Geocentrically; Speed Differentials of Planets; Right Ascension & Declination; Daily Variations; Motions of Mercury, Mars, Venus, & Saturn; Neptune; Perihelion and Aphehlon; Conjunctions; Effects of Zodiacal Signs; Parallax; Retrograde Motion; Detailed Trading Rules Using These Principles. **CAT#390 \$65.00**

Tides In The Affairs Of Men: an Approach To The Appraisal Of Economic Change
Edgar Lawrence Smith. 1939 178p. One of the Most Important Classics on Cycle Theory, Speculation, Mass Psychology, and their Causes. Part I: The Decennial Pattern & Other Periodicities. Biological Cycles & Stock Prices; Corroborative testimony of Decennial Recurrence; Tides In Mass Psychology; Speculative Psychology; The Weather; graphic Analysis the III Years & 1881-1936; Seasonal & Decennial Tendencies; Nine Year Period. Part II: Economic Response to Solar Change. An Hypothesis of Solar-Economic Relationships & Their Measure In Terms of Weather Data. Anthropologists, Physicians, & Psychologists; Meteorologists; Rainfall & Stock Price Movements; Sun Spot Cycles - Rainfall & Stock Price Movements; Weather as a Measure of Solar-Economic Change; Effects of Seasonal Changes In Solar Radiation & Weather; Meteorological Appraisal of Probabilities; Sun, Weather & Stock Prices; Pig Iron; Cotton; Commodities Prices; Bibliography. **CAT#099 \$55.55**

On The Sensations Of Tone: As A Physiological Basis for The Theory of Music
Hermann L. F. Helmholtz, M. D. 1885 575 8x11"p. Profusely Illustrated. The Greatest Work on the Theory of Music & Harmonics, & a Detailed Presentation of the Law of Vibration. Baumring Used this Work as his First Introduction to Vibration, Harmonics & Music Theory. On the Composition of Vibrations; Upper Partial Tones & Qualities of a Tone; Analysis of Musical Tones by Sympathetic Resonance; On the Analysis of Musical Tones By The Ear; On Differences in Quality In Musical Tones; On The Apprehension of Qualities of Tones; Combinational Tones; On The Beats of Simple Tones; Deep & Deepest Tones; Beats of Upper Partial Tones; Beats Due to Combinational Tones; Chords; General View of the Different Principles of Musical Style In The Development of Music; The Tonality of Homophonic Music; The Consonant Chords of The Tonal Modes; The System of Keys; Of Discords; Laws of Progression of Parts; Aesthetical Relations; Appendices: Resonators; On the Motion of Plucked Strings; Production of Simple Tones By Resonance; Vibrational Forms of Pianoforte Strings; Analysis of Motion of violin Strings; Theory of Pipes; On Composition of Vowels; On Phases of Waves Caused By Resonance; Relation Between Strength of Sympathetic resonance & Length of Time Required For Tone to Die Away; Vibrations of the Membrane of Basilaris in the Cochlea; Theory of Compositional Tones; Variation in Pitch of Simple Tones that Beat; Calculation of Intensity of Beats of Different Intervals; On Temperament; On Determination of Pitch Numbers; On Calculations of Cents from Interval Ratios; Musical Intervals, Not Exceeding Octave, Arranged In Order of Width; Musical Duodenes, or The Development of Just Intonations for Harmony; Experimental Instruments Exhibiting Just Intonation; On Tuning & Intonation; History of Musical Pitch In Europe; Non-Harmonic Scales; Recent Work on Beats & Combinational Tones; Analysis & Synthesis of Vowel Tones. Exhaustive Treatment, A Masterpiece! **CAT#109 \$77.77**

Principles Of Electricity Applied To Telephone & Telegraph Work. A Training Course Text

1938 346 8x11"P. 100's Of Diagrams & Illustrations. This Selection Has Been Made As A Reference Work For W. D. Gann's Law Of Vibration. This Is A Superb Presentation Of The Foundations Which Gann States In His Ticker Interview Are The Basis Of His System Of Forecasting Through The Law Of Vibration. This Is The Most Complete & Integrated Presentations Of The Principles Of Vibrations & Waves & The Forces Governing Them Which We Have Found. There Are Diagrams Here Which Explain The Scientific Basis Of Many Diagrams In Sacred Geometry Texts And Market Texts Like Torque Analysis, Wyler & Gann. Contents: Elementary Definitions & Ohm's Law; Electric Circuit; Electrical Pressure Or Electromotive Force; Resistance; Current Volt; Series & Parallel Circuits; Properties Of Electrical Conductors; Solution For D. C. Networks; Kirchoff's First Law; Conductance; Kirchoff's 2nd Law; Magnets & Magnetic Circuits; Nature Of Magnetism; Electromagnets; Relation Between Current & Field Intensity; Flux Density; Field Intensity & Permeability; B-H Curves; Hysteresis; Electrical Measurement In Direct-Current Circuits; Measurements Of Resistance; Drop In Potential Method; Direct-Current Dynamo-Electric Machine; Induced Electromotive Force; D-C Motors; Batteries; Thermo- & Photo-Electric Effects; Rectifiers; Inductance & Capacity; Principle Of Telephone; Sound; Retardation Coils; Telegraph Circuits, Principles Of Operation; Principle Of Polar Duplex Operation; Bridge Polar Duplex Systems; Differential Duplex Systems; Principle Of Vibrating Circuit; Polarential & One-Way Polar Systems; Telegraph Transmission Principles; Nature Of Telegraph Signals; Wave Shapes In Neutral Telegraph Systems; Bias Distortion; Wave Shapes In Polar Telegraph Systems; Characteristic Distortion; Fortuitous Distortion; Alternating Currents; Source Of Alternating E.M.F.; Sine Wave; Phase Relations & Vector Notation; Effective E.M.F. & Current Values; Power In A.C. Circuits; Ohm's Law & Alternating-Current Calculations; Inductive Reactance; Capacity Reactance; Combination Reactances; Impedance; Series Networks; Parallel & Series Parallel; Networks; A.C. Resistance; Resonance; Repeating Coils & Transformers; Mutual Induction; Theory Of Transformer; Hybrid Coil; Transmission Theory Of Long Telephone Lines; Transmission System; Transfer Of Power; Pollard's Theorem; Equivalent Networks; Reflection & Transition Loss; Loading; Cut-Off Frequency; Effect Of Loading Upon Wave-Length Constant; Mechanical Analogy Of Loading; Attenuating, Equalizing, & Time-Delay Correcting Networks; Time Delay Or Phase Equalizers; Filters; Low & High Pass Filter Sections; Composite Filters; Crystal Filters; Lattice Networks; Vacuum Tubes; Electrode Tubes; Diodes; Triodes; Tetrodes; Pentodes; Amplifier; Generator & Oscillator; Noise; Telephone Repeaters & Amplifier Circuits; Negative Feedback Amplifiers; Principles Of Carrier; Elements Of Carrier System; Modulation; Demodulation; Sources Of Carrier Frequencies; Types Of Carrier Systems; "Low Frequency" & "Broad-Band" Carrier Systems; Noise & Crosstalk; A.C. Tests & Measures; Carrier-Frequency Transmission Measurements; Impedance Bridge 7 Measures; Line Impedance; Frequency Meters; Physical Quantities & Units Of Measurement; Mechanical Quantities; 3 Fundamental Units; Density & Specific Gravity; Velocity & Force; Acceleration; Force; Work; Power; Energy; Construction & Use Of Curves; Wave Motion Frequency Scales; Vibratory Motion; A-C Frequency Scales; Wave Analysis. **CAT#153 \$77.77**

Cosmic Patterns. John Nelson. 80p. A Baumring Favorite "producing evidence that the planets do, when in certain arrangements, cause changes in the particular solar radiations that are associated with magnetic storms in the atmosphere of the earth." Nelson was employed by RCA to study sunspots in order to forecast magnetic storms which would disrupt shortwave radio communications. Nelson discovered that some natural forces besides sunspots were in some way involved in this phenomena, and found that the planets as they circled the sun were a part of the answer. Within a few years Nelson was able to build a forecasting system for shortwave communications facility throughout the world, based upon a combination of sunspots and planetary interrelationships. This book explains in great detail the methods used. Contents: Introduction to Sunspots, the Ionosphere, and Shortwave Radio; Early Research Period; The Search For Angles; The Search for Harmonic Refinements; Summary. **CAT#442 \$55.55**

The Rational Non-Mystical Cosmos, The Mysticism Of Science Exploded. George F. Gillette. 1933 384p. Profusely Illustrated With Superb Cosmological Diagrams. Title Page: "Major 'Mysteries' Solved: Re-Creation, Radiation, Heat Light, Color, Electricity, Gravitation & Internal Structure Of Mass, Etc. The Single Law Of Nature, A Unitary Conception Of All Natural Phenomena And Of The Subatomic Mechanism Of The Cosmos Novel, Original & Revolutionary. The New Physics, Pure Newtonian Physics & Euclidian Geometry. The Greater Relativity Theory Of Subatomia, A Rational, Hypothetical System Of The Cosmos In Its Entirety. Simple Mathematical Reasoning Versus The Mystical Legerdemain Of Higher Mathematics. Ho Mystical Mathematics Of Fourth Spatial Dimensionalism Employed, No Metaphysics. A Scientific Version Of Genesis." Contents: Cosmic Cycles Of Velocity And Plane; Cosmic Planes Of Size And Cycles Of Velocity; Chart Of The Cosmos; Majestic Cyclorama Of The Cosmos And Its Infinite Series Of Cycles Of Energy; First Law Of Nature; Sole Source Of Energy; Relativity Of Power; Universality Of Energy; Mass & Matter-Motion-Energy; Cosmic Cycles Of Empty Space; Re-Creation Of Higher Plane Mass, Co-Swirlation; Growth & Shrinkage; Co-Bumped Swirls, Solar Systems, Tornadoes; Vortex Systems; Cycles Of Power & Velocity; Ether Swirls; Wheels Within Wheels; Cosmic Velocities; Newton's Laws; Cosmic Cycles Of Sound; Super Dimensions Of Space; Gyroscope; Color Velocities. A Magnificent Cosmological Masterpiece Redefining The Fundamentals Of Science From A Much Deeper Perspective. Not To Be Missed!! **CAT#362 \$55.55**

The Principles Of Light & Color: Including Among Other Things The Harmonic Laws Of The Universe, The Etherio-Atomic Philosophy Of Force, Chromo Chemistry, & The General Philosophy Of The Fine Forces. Edwin D. Babbitt. 1878 560p. Illustrated By 204 Exquisite Photo-Engravings, Besides Four Superb Colored Plates. This Is The Famous Work Unavailable In Its Original Unabridged Form With Color Plates For 100 Years. Original Source For The Vortex Molecule So Often Pictured In Theosophical Writings. Recommended By Baumring, This Extraordinary Work Should Be Studied By Everyone. Contents: Harmonic Laws Of The Universe: Light; Nature Our Guide; Unity; Diversity; Harmony; Gradation Or Progression; Contrast; Harmony Of Analogy; Violent Contrasts Contrary To Natures Laws; Nature's Unrestricted Growth Never Discordant; Law Of Perfection; Truth; Divisions Of Colors; Triad Of Primary, Secondary & Achromatic Colors; Hues; Grays; Spectrum; Contrast; Harmonic Colors In Architecture. Insufficiency Of Present Theories Of Light & Force; Science & Philosophy Combined; Cohesion; Chemical Affinity; Electricity; Gravitation; Physiology & Psychology; Light & Color Formulated By Law; Chromatic Phenomena; How Is Light Projected; Shadow Is An Entity; Knowledge Of Atoms; Therapeutic Properties Of Color; Dynamic & Material Theory; Faraday; Bacon; Locke & Tyndall; Kant; Fitch; Schelling; Laws Of Optics. Etherio-Atomic Philosophy Of Force: Atoms; Force; Size Of Atoms; Form Of Atoms; Heat End Of Atoms; Nature Of Atomic Spinals; Ethereal Forces; Primate Of Force; Grades Of Ether; Ethers Have Weight; Polar Cohesion Of Atoms; Laws Of Atomic Combination; Lateral Cohesion; Unity Of Atoms; Transverse Layers Of Atoms; Paraverse Layers Of Atoms; Crystalloid & Amorphous Bodies; Heat & Cold; Types Of Electricity: Frictional, Chemico, Galvano, Magneto, Chromo; Magnetism; Diamagnetism; Phosphorescence; Fluorescence; Directional Electricity; Weight & Heat Of Atoms; Latent & Sensible Heat. Sources Of Light: Nebulous Matter; Sun Formation; Planet Formation; Comets; Refinement Of Matter; Atmosphere Of Space; Aurora Borealis; Terrestrial Forces; Solar Atmosphere; Sunspots; Production Of Light; Moon; Planets & Fixed Stars; Calcium Light; Combustion. Chromo Chemistry: Spectrum Analysis; Spectroscope; Laws Of Color; Chemical Repulsions; Elements; Metals; Octaves Of Color; Sunlight. Chromo-Therapeutics, Or Chromopathy: Healing Power Of Color; Powers Of Each Color & Healing Effects Of Each Shade & Gradation. Chromo Culture Of Vegetable Life: Germination; Growth; Reproductive Function Of Plants; Insect Life. Chromo Philosophy: Refraction; Reflection Of Light; Absorption; Transparency; Polarized Light; Undulatory Theory. Chromo Dynamics, Or Higher Grade Lights & Forces: Odic Light & Color; Influence Of Solar & Lunar Rays; Magnetism & Odic Force; Proof That Odic Light Comprises Fluidic Forces. Beauty Of Fine Forces; Higher Colors Reveal Primary Laws Of Force; Higher Vision; Psychic Force; Colors & Forces Of Brain; Right & Left Brain; Radiations & Laws Of Power Intuition; Positive & Negative Poles; Interior Machinery Of Life; Process Of Mental Action; Organ Of Higher Vision. Sensation Of Light; Perception Of Colors. **CAT#167 \$77.77**

Ancient Calendars & Constellations. Hon. Emmeline M. Plunket 1903 263p. With 26 Plates Of Calendars & Constellations. A Rare & Important Work On The Classification & Analysis Of The Ancient Calendar Systems & Their Relation To Astronomical Phenomena. Contents: Accadian Calendar: 200 BC, 2000 BC, 3800 BC, Ancient Calendar Siderial; Modern Calendar Tropical; Constellation Aries; Solstice In Aries 6000 BC; Stars Recede From Seasons; Equinox In Aries 200 BC; Aries, Leader Of Signs; Antediluvian Astronomy; "Knowing Good & Evil"; Aries Not Conspicuous & Widely Honored; Market A Season; Two Calendars In Egypt; Amen's Ram-Headed Symbols; Amen & Egyptian Year; Amen & Aries; Fixed & Vague Years; Temple Orientated To Aries; Zodiac Prehistoric. GU, Eleventh Constellation Of Zodiac: Uncertain Meaning; GU=GULA=BAU; Winter Solstice In Aquarius; Aries & Aquarius; Rival Calendars. Median Calendar & The Constellation Taurus: Equinox In Taurus Persian Nowroose; Mithras & Equinox; Mithras Slays Bull; Bull Lion, Scorpion, Eagle; Eagle For Water Man; Griffin & Solstices; Persepolitan Demi-Bulls; Median & Assyrian Art: Greek Vs. Indian Science; Solar Zodiac Grecian; Hindu Calendar 570 AD; Week-Days; Varahamihira; New Sources Of Knowledge; Zodiac In Asia In 3000 BC; Aries Leader In 3000 BC; Zodiac In VEDA Denied; Zodiac In VEDA Claimed; Indra And "Atmospheric God", God Of Summer Solstice; Vritra & Hydra; Hydra & Darkness; Hydra & Doubt; Soma Pavamana = The Moon; Moon In Aquarius; Agni In Waters; Sun Is Aquarius; Vedic Imagery Out Of Date; Assyrians Copied Medes; Symbolic Standard Median. Astronomy In The RIG VEDA: Initial Point Of Zodiac; Aswins; Astronomical Correlations Of Gods In Veda; New Year Divinities; Aswin Legends - Pre-Vedic; Ahura Mazda; Moon In Sagittarius. Ancient Indian Astronomy: Astronomy In Talmud & Bible; Full Moon; New Moon & Solar Eclipses. The Chinese Calendar, With Some Remarks With Reference The Chaldeans: Chinese & Hindu Lore; 16,916 BC; Gregorian Year, 1582 AD; Chinese Calendar, 1624 AD; 2510-2431 BC; "15 Degrees Du Verseau". Antiquity Of Constellations, 24 Plates Correlating The Constellations Of The Ancients: Crab = Scarab; Scales = Plumes; Twins - Equal Day & Night. **CAT#158 \$55.55**

The Calendar Of Tiahuanaco: A Disquisition On The Time Measuring System Of The Oldest Civilization In The World. H. S. Bellamy & P. Allan 1956 440p. With 53 Diagrams. Contents: Symbology Of The Calendar Of Tiahuanaco: Symbols: Satellitic Symbols; Solar Symbols; Signs, Elements, & Steps; Features; Remainders; Conspectuses Of Symbology; Brackets Of The Symbols; Chronological Evaluation Of The Calendar Of Tiahuanaco: The 24 Day Cycle; The Evaluation Of The Halo Symbols Of The First Twelfth; Day Of Autumnal Equinox; Identification Of The Symbols On The Pedestal Of The First Twelfth With The Revolutions Of The Satellite In One Twelfth; Elements On The Bodies Of The Puma-Faced Fishes; Symbols Above The Heads: References To Meridian Altitudes & Obliquity; Additional Symbolism: The Notation Of Visible & Non-Visible Eclipses; Pedestals: References To Sun's Amplitude; Signs Inside Pedestals: Linking Twelfths Of Comparable Amplitude; Symbols At Ends Of Pedestals Refer To Horizontal Eclipses; Solstice Trumpeters: Dates Of Solstices & Eccentricity Of Terrestrial Orbit; Great Meander; Faces & Heads; Compensations & Discrepancies; Winged Figures: Detailed Representation Of Peculiarities Of Eclipse Cycles Throughout Year; Identification Of Symbolism Of All Features; Reason For Anthropomorphic & Ornithomorphic Designs Of Figures; Spirals & Shells; Counting Board For Eclipses; Tables For Eclipses Near Horizon, Satellitic, Solar, & Shell Eclipses; Chronological Aspects Of Temple; Orientation Of Temple & Proportions; 11 Pillars On West; Why Grand Portal & Staircase Are To North Of Axis; Sitting & Orientation Of Calendar Gate; Tiahuanacan Linear Unit Of Measurement; Real Diameter Of The Satellite; 'Tuncamayani' - The Number 11 - The Hendecade; T/Hours & T/Minutes; Tiahuanacan Time Scale & Relation To Winged Figures & Circle; Symbolism Of Body; Central Part Of Body; Human Face Symbols; Distribution Of Symbols Between Left & Right Sides; Epoch Of The Calendar; Map Of Tiahuanaco; Puma Punku Calendar; Indications Of Certain Ratios In Relation To Circle: 22:7 Ratio; 14:11 Ratio; Future Of Calendar Gate. **CAT#159 \$55.55**

The Dawn Of Astronomy: A Study Of The Temple Worship & Mythology Of The Ancient Egyptians. J. Norman Lockyer . 1890 432p. Profusely Illustrated. Contents: Worship Of Sun & Dawn; First Glimpses Of Egyptian Astronomy; Astronomical Basis Of Egyptian Pantheon; Two Horizons; Yearly Path Of Sun-God; Probable Hor-Shesu Worship; Methods Of Determining The Orientation Of Temples; Earliest Solar Shrines In Egypt; Similar Shrines Elsewhere; Solar Temple Of Amen-Ra At Karnak; Age Of Temple Of Amen-Ra At Karnak; Stars - Risings & Settings; Egyptian Heavens - Zodiacs Of Denderah; Circumpolar Constellations: Myth Of Horus; Temples Directed To Stars; Stellar Temples; Building Inscriptions; Star Temples At Karnak; Personification Of Stars; Temple Of Isis & Hathor; Star-Cults; Amen-T & Khons; Egyptian Year & Nile; Years Of 360 & 365 Days; Vague & Sirian Years; Sothic Cycle & Its Use; Calendar & Revisions; Fixed Year & Festival Calendars; Isis & Osiris; Temple-Stars; History Of Sun Worship; Early Temple & Great Pyramid Builders; Cult Of Northern Vs. Southern Stars; Origins Of Egyptian Astronomy - Northern & Thebes Schools; Conclusions As To North & South Races; Egyptian & Babylonian Ecliptic Constellations; Influence Of Egypt Upon Temple Orientation In Greece. **CAT#160 \$55.55**

The Numeration, Calendar Systems & Astronomical Knowledge Of The Mayas. Charles P. Bowditch . 1910 346p. 64 Illustrations, 33 Tables, 19 Plates. Originally Printed By Cambridge University Press For The Use Of The Peabody Museum Of Harvard University. An Extraordinary & Exhaustive Work On Mayan Cosmology, Like No Other! Contents: Sources Of Information; Day Signs In Codices; Day Forms In Columns; Day Series Continuous; Lanes & Dots In Mayan Numeration; Red Day Numbers 1-13; Columns & Rows Of Numbers; Direction Of Reading Numbers; Scattered Numbers; 20; Numeration By Position; Long Numerical Series Of Codices; Uinal; Kin; Tun; Katun; Black Numbers; Uinal Or Month Signs In Codices; Names Of Months; Day Numbers Of Beginning Of Month; Year 7 Calendar Round; 52 Year Period; Year Bearers; Goodman's Plan; Distinction Between Year & Calendar; Higher Numbers Of Codices; Table Of 80 Calendar Rounds; Dresden Codex; Day & Month Forms In Inscription; Initial Series; Forms For Zero; Supplementary Series; Grand Cycle Glyph; Period Forms; Nine Cycles; Palenque Temples; Distance Numbers & Dates; Heads Faces & Meaning; Cycle Numbers; Methods Of Fixing Dates; End Glyphs; Lapse Glyphs; Intercalary Days; Mexican & Mayan Methods; Other Astronomical Knowledge Of The Mayas; Moon; Table Of Lunar Revolutions; Planets: Mercury; Jupiter; Saturn; Venus; Mars; Glyphs With 13 & 19; Phoneticism; Mayan Time Cycles; Counting Time; Long Count; Calculating Time; 13 Or 20 Cycles In Grand Cycle? Continuous Series; Wheels; 13 Number Count; 260 Day Count; Year Count By Days & Months; 13 Katun Count; Mayan Time Wheels; Mexican Calendar & Count; Times Of Revolutions Of Planets; Lengths Of Various Years. Planet Glyphs; Moon Series; Jupiter Series; Period Rounds. **CAT#161 \$55.55**

The Book of Enoch The Prophet Richard Laurence, LL.D. 1838, 250p. Considered one of the most important books left out of the Bible, and a primary source and inspiration of early Christianity. What is of particular importance in this book is its presentation of Time Cycles, making this more than a spiritual text, but an important Cosmological Treatise, and Ancient presentation of Time Cycles. Referred to by Blavatsky in the Secret Doctrine, this work presents many Ancient & Prophetic Mysteries. **CAT#396 \$44.44**

The Key To The Bible(Mathematical Kabbala) Harry Waton. 1952 97p. An Advanced Mathematical System Developing a Kabbalistic Interpretation of the Bible. Exceptional Representation of Qabalistic Cosmology. Baumring Pick for Deciphering Gann. Contents: First, Second & Third Aspects of The Mathematical System; The Shem Hamphoresh; An Introduction to the Kabbalah; Mathematics is the Key to All Knowledge & Understanding; Must Use a Mathematical Order of a Higher Nature; Hebrew Alphabet Numerical Correspondences; Additions & Summations; Geometric Symbolism; Anthropomorphism; All Creation Starts as a Point, Becomes a Line, Becomes a Surface, Becomes a Solid. Creation Begins With The First Letter of Tetragrammaton; Time is Life is Energy is Motion. All Motion in Existence is Cyclic; Light Becomes Matter. Infinite & Eternal Attributes, Modes & Aspects; Time - Space - Matter Continuum; Key to Decoding the Bible. Superb Work on Kabbalah!! **CAT#116 \$55.55**

Vibrations: Their Principles, Light & Colors: Their Uses

Ernest J. Stevens, M. S., Ph. D. 1920-21 144p. Another Baumring Pick. Vibration Is The Language of the Universe; Light Is Nature's Book of Knowledge; Color Is Nature's Alphabet; Music is the Harmonious Vibration of the Spheres. Detailed Contents Coming Soon! **CAT#115 \$55.55**

The Science Of Numerology Through The Law of Vibration. John C. Laurie 102p. An Analysis A Development of Numerological Keys Based Upon an Understanding of the Law of Vibration. Contents: What is Numerology; Philosophy of Life; What is Man?; Numerical Key; Inner Self, Soul & Individuality of Numbers; Names & Numerical Values; Vowels & Consonants; Birth Path; Vocational & Expression Number; Musical Instruments; Disturbing Effects; Rulership of Numbers over Human Body; Desires of Soul Expressed By Numbers; symbolism of Compound Numbers; Numbers & Days of Week; Outstanding Compound Numbers; Vowel Colors; Harmonious Vibrations; Cyclic Hour, Day & Month of World; Forecasting; What Different Cycle Years Mean in Life; Cyclic Months & Characteristic Days; Characteristics of Each Cyclic Day; Law of Nine Cycles, Days, Months, Years; Zodiacal Signs & Vibrations; Vibrations of Planets & Characteristics of Number Combinations. **CAT#117 \$44.44**

Periodicity: The Law Of All Life. Prof. Jos. Rodes Buchanan, M. D. 1912 136p. A Scientific Secret Revealed. Periodicity, the Absolute Law of the Entire Universe Long Known to Control All Matter Now Revealed As The Law of All Life & The Periods Discovered, Showing Its Application to All Areas of Life. One of Baumring's Secret Books. Contents: Periodicity; Seven Prevalent Number In Nature; Septimal Division In All Affairs of Life & Solar System; Periodicity Throughout the Universe; Moon; Universal Influence of Celestial Bodies; Hippocrates; Kepler; Moon Governed By Seven; Earthquakes; Sir John Herschell; Kepler Explained Wind & Storms Caused By Moon & Planets; Moon Influences on Disease; Meteorology; New & Full Moon Dangerous; Moon Effects on Insanity; Flow of Sap; Weather; Tides; Critical Days in Diseases; Septimal System; Represented By Days of Week; Periodicity & Fate of Country; National Periodicity; Laws of Periodicity Applied to Hours of The Day; Vital Periods & External Periods Compared; The Light of the Soul & the Light of the Sun As Sources for Life; The Fortnightly Periods of a Long Life; Periods of Immortal Life & Parental Influences; Year & Day Compared; Periodicity of Days, Months & Years; Periodicity of Napoleon; Final Heavenly Rule; Periodicity Compared To Astrology. **CAT#118 \$55.55**

The Number Key To Ancient Wisdom. J. W. T. Carrington . 1932 92p. With Introduction, Copious Exemplifications, & Tables of 300 Prime Numbers & 100 Upward Summations. A Handbook Expository of the Principles of the Astronomical Wisdom-Doctrine in Greek & Hebrew Cryptography. A Superb work on Kabalistic Numerical Codes, Fundamental for Understanding Gann. Contents: Letter - Number Key; Transliteration From Greek; Transliteration From Hebrew; Greek Number - Letters; Hebrew Number - Letters; Principle of the World Number; Principle of Numerical Interpretation; Rules For Numerical Analysis; Scheme of (Radical) Numerical Significances; Notanda Thereupon; Special Significance in Higher Numbers (In Ascendant Order) Addenea & Appendix - Table of Upward Summations; Table of Prime Numbers. **CAT#119 \$44.44**

The Astrological Relation of Names & Numbers. Effie M. Cooley . 1912 108p. Baumring Selection Discussing Key Notes for Finding Market Vibratory Rates, Zodiacal Harmony and the Astrological Numerological Correlations. Contents: Location of Sun In Zodiac Per Month; Influence of Sun; Numbers of Working Principle; Key Notes; What They Are, Use & Meaning; Name Delineations; Meaning of Numbers; coincidences in the Life & Name; Repetition of Numbers; Lucky Months & Years; Parts of the Body & Numerical Correspondence; Color by Vibration Sign & Planet; Symbols of Numbers in Zodiacal Harmony; Harmonizing Work for Use in Concentration; Products that Harmonize; Meaning of Letters; Colors; Use & Meaning; How to Name a Business the Vibrations Point to Success; Numerical Values of Names of States. **CAT#128 \$44.44**

TO ORDER ANY OF THESE WORKS GOTO: WWW.SACREDSOURCE.COM