

# KELLOGG

**USE — is the Test**

## *1921 SWITCHBOARD PEG STATISTICS USED AS INSERTS IN "Telephone Facts" MAGAZINES, JANUARY THROUGH JULY*

Printed on yellow paper originally but presented here in monochrome to save file space, these inserts present the peg counts from operating local switchboards and show how the Kellogg board can reduce the number of operators required. Each insert had a third page that contained an advertisement or additional information. The page with "Ten Cardinal" reasons was used in several issues but is only shown in this PDF once.

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# What a KELLOGG Service Board Will Do

## THE HOME TELEPHONE CO.



124 W. MARKET STREET  
WABASH, INDIANA

Nov. 29, 1920.

### DIRECTORS

N. G. HUNTER, PRESIDENT  
W. H. WEBBER, VICE PRES.  
H. E. WALLACE, SECRETARY  
JOHN HIPKIND, TREASURER  
W. H. VANHORN, GEN. MGR.

Mr. H. D. Currier, Chief Engineer,  
Kellogg Switchboard & Supply Co.,  
Chicago, Ill.

My dear Currier:

I am inclosing herewith two schedules, one of which shows our present operating schedule, and the other, a schedule showing the amount of traffic we handled during the month, carried out in such a way that I believe it is self-explanatory.

You will please note that there has been a noted reduction in our operating force. We have reduced it by fourteen operators in our local force and by taking a very conservative estimate, it will save us in the neighborhood of \$7400 annually.

Very truly yours,

*W. H. Van Horn*  
Manager.

WHV\*RR

The following schedule shows traffic on the Wabash Service board (from 7.00 a. m. to 10.00 p. m.) taken the first 14 days after installation, November 1st

7-8 A. M.	8-9 A. M.	9-10 A. M.	10-11 A. M.	11-12 M.	12-1 P. M.	1-2 P. M.	2-3 P. M.	3-4 P. M.	4-5 P. M.	5-6 P. M.	6-7 P. M.	7-8 P. M.	8-9 P. M.	9-10 P. M.	Total Daily	
1390	2051	1521	1480	1341	1517	1375	1374	1041	1454	1055	1718	757	435	180	18689	
1382	1873	1792	1364	1359	1590	1384	1433	1389	1618	1570	1644	1053	738	793	20982	
1660	2089	2043	1094	1091	1520	1415	1135	1079	1432	1042	823	394	1216	175	18208	
1332	1370	1670	1364	1004	1303	1273	1153	912	1053	1096	1341	833	283	119	16088	
944	1975	1877	1166	989	956	1082	963	1006	1288	1125	713	750	375	141	15350	
1113	1517	1528	1166	1062	1236	1183	875	831	1239	1233	1262	885	309	108	15897	
872	1513	1430	1427	710	769	1046	560	876	826	1130	1291	619	144	191	13404	
931	1756	1453	1326	1453	1254	1480	1408	1090	604	1175	838	666	310	210	15954	
774	1688	1666	1459	1484	1225	1586	1306	1031	1468	1054	1336	1061	411	320	17869	
148	740	986	604	546	620	414	330	259	291	317	1318	547	296	197	7613	
1152	1272	1609	1384	1230	1208	1316	1118	930	1192	1146	1146	776	364	306	16168	
1044	1771	1595	1365	1048	1049	1157	1206	1063	1540	1199	1157	748	348	129	16419	
1146	1720	1695	1268	1245	1209	1440	1405	966	1129	1089	1448	812	512	135	17219	
1539	1503	1375	1474	969	1163	994	995	798	1424	1122	1145	800	831	283	16415	
<b>Average—</b>	<b>1102</b>	<b>1631</b>	<b>1588</b>	<b>1306</b>	<b>1109</b>	<b>1194</b>	<b>1229</b>	<b>1090</b>	<b>961</b>	<b>1164</b>	<b>1099</b>	<b>1255</b>	<b>852</b>	<b>332</b>	<b>234</b>	<b>16162</b>

Schedule showing average number per operator:

7- 8 A. M.	367	10-11 A. M.	325	1-2 P. M.	407	4-5 P. M.	291	7- 8 P. M.	284
8- 9 A. M.	407	11-12 M.	369	2-3 P. M.	363	5-6 P. M.	275	8- 9 P. M.	166
9-10 A. M.	397	12- 1 P. M.	298	3-4 P. M.	320	6-7 P. M.	253	9-10 P. M.	171

Hourly average per operator 313, fourteen days after the cut-over to an entirely new and different equipment. Soon they will average 400.

This schedule is taken on an average and of course some operators handle more traffic than others. We have, on many occasions, had operators handle 600 or more calls per hour. The record is 616.

## The present operating schedule of the Home Telephone Company of Wabash, Indiana

HOURS—	New Schedule				Old Schedule				Saving			total
	local	rural	toll	total	local	rural	toll	total	local	rural	toll	
6:30- 7:00 A. M.	1	0	1	2	2	1	4	7	1	1	2	4
7:00- 8:00 A. M.	3	1	3	7	9	2	4	15	6	1	1	8
8:00- 9:00 A. M.	5	2	3	10	9	2	4	15	4	0	1	5
9:00-10:00 A. M.	5	2	3	10	9	2	4	15	4	0	1	5
10:00-11:00 A. M.	5	1	3	9	9	2	4	15	4	1	1	6
11:30-12:00 M.	5	1	3	9	9	2	4	15	4	1	1	6
12:00- 1:00 P. M.	4	1	3	8	9	2	4	15	5	1	1	7
1:00- 2:00 P. M.	4	1	3	8	9	2	4	15	5	1	1	7
2:00- 3:00 P. M.	4	1	3	8	9	2	4	15	5	1	1	7
3:00- 4:00 P. M.	4	1	3	8	9	2	4	15	5	1	1	7
4:00- 5:00 P. M.	4	1	3	8	9	2	4	15	5	1	1	7
5:00- 6:00 P. M.	5	1	2	8	9	2	4	15	4	1	2	7
6:00- 7:00 P. M.	3	1	3	7	7	2	4	13	4	1	1	6
7:00- 8:00 P. M.	3	1	3	7	7	2	4	13	4	1	1	6
8:00- 9:00 P. M.	3	1	2	6	5	1	4	10	2	6	2	4
9:00-10:00 P. M.	1	1	1	3	3	1	2	6	2	0	1	3

The present new schedule includes 1 relief operator from 8 A. M. to 8 P. M.

Present operating force consists of 1 chief operator 2 night operators 6 toll operators 2 supervisors 7 local operators 1 information operator 5 part time local operators. (These work four to five hours daily and might be equivalent to 3 local operators.)

The new switchboard has enabled them to reduce their local force 50%.

With the additional facilities they economized in many respects on their old toll board and rural board so that they were able to eliminate 2 toll operators and utilize 1 rural operator for local service.

# The Ten Cardinal Features of the Kellogg Service Board

MACHINE RINGING—Makes the call that must be answered.

KEYLESS LISTENING—Rapid answering.

SECRET SERVICE—Operators can't hear conversations.

REGISTER PEG COUNT—The cash register of telephone switching.

TRAFFIC DISTRIBUTION—All calls for all operators; fast, even, operating.

INSTANTANEOUS RECALL—Each call of every subscriber a positive signal immediately answered.

REVERTIVE RINGING TONE—You hear the called party being rung.

INSTANTANEOUS DISCONNECT—Every subscriber's line a two-way trunk line.

RINGING CONTROL—When you hang up the called bell stops ringing.

DARK KEYSHELF—Light on the keyshelf has a definite meaning.

**All that goes to make the best service.**

Permit us to make a study of your plant without cost to you and we will guarantee the minimum operating and maintenance costs, service the people want and a profitable exchange. Find out what other Kellogg exchanges are doing throughout the world.

**USE IS THE TEST.**

**Kellogg Switchboard & Supply Company**  
CHICAGO, ILLINOIS

# What a KELLOGG Service Board Will Do

—2—

## THE ILLINOIS TELEPHONE COMPANY

CAPITAL STOCK, \$500,000.00

### Directors

S. W. INGALLS      M. H. ROSS  
M. R. FITCH      C. T. METCALF  
J. H. DIAL      F. C. FUNK  
S. E. SIMPSON      C. H. RUSSELL  
W. W. HOLLIDAY



LOOK FOR THE SHIELD

### Officers

W. W. HOLLIDAY, President, Jacksonville  
C. H. RUSSELL, Vice President, Jacksonville  
J. F. SHREVE, Treasurer, Jacksonville  
J. H. DIAL, Secretary and Auditor, Jacksonville  
W. W. HOLLIDAY, General Manager, Jacksonville

JACKSONVILLE, ILL.,  
Dec. 28th, 1920

Kellogg Switchboard & Supply Co.,  
Chicago, Ill.

Attention of Mr. Green

Gentlemen:-

Enclosed please find some peg counts  
which speak for themselves.

You will notice the day before Christmas  
was some record, 37,353 calls is certainly a record,  
for the twenty-four hours.

Yours very truly,

The Illinois Telephone Company,

By W. W. Holliday  
Gen'l. Mgr.

*File this report as it is the second of a series  
of many similar reports that will be sent  
to you with Telephone Facts each month.*

*February, 1921*

# and they had only 7 local operators on the board during the busy hour!

Among seven operators, they averaged 458 calls in the busy hour

KELLOGG SWB. & SUP. CO. Illinois TELEPHONE CO. OF Morgan County  
110 W. Jefferson - Knoxville HOURLY RECORD OF CALLS AT Jacksonville Ill. EXCHANGE DATE Dec 24 1920

CLASS OF SERVICE	NO.	A. M.										NOON								P. M.								TOTAL CALLS
		12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12			
General	1						1	12	163	367	395	383	348	257	349	311	266	234	157	182	233	63	19	13	11	3208		
3.	43	29	8	7	19	23	110	287	355	454	243	437	422	482	361	313	174	364	300	186	34	37	9	3790				
4.																									4799			
5.							64	273	331	494	347	397	166	462	326	384	458	347	344	211	457	433	130	47	5743			
6.																									4558			
7.																									4313			
8.																									3204			
9.																									4746			
																									36528			
Prof.	2						2	1	26	43	57	57	59	38	41	60	28	53	66	23	35	26	21	17	643			
W. W.																			2	3		6			16			
Sent	7		134																						Call messages 276			
Recd	"		113																						Local & County Calls 26,318			
Transm.	"		1																						Call messages 276			
Conv.	"		36																						Interoffice calls 643			
			326																						Chief Operator 16			
																									37,253			
TOTAL CALLS PER HOUR		46	29	7	7	19	56	187	1354	3033	3653	4993	3972	2481	3242	2995	2047	3983	2949	2119	1865	1344	234	192	62	37,253		
NO. OPERATORS PER HOUR		1	1	1	1	1	2	5	8	8	8	8	8	8	8	7	8	8	7	7	5	3	2	1				

## LISTENING FEATURES

- Multiple Line Lamp
- Automatic Listening

- Non-Interfering Answering
- Recall Key

## CALL FEATURES

- Meter Answering Cord

## SIGNAL FEATURES

- Flash Recall (Ans. Cord)
- Dark Keyshelf

## RING FEATURES

- Automatic Ringing
- Revertive Ringing Tone
- Ringling Controlled by Called Party

Peg Count Sheet of the Illinois Telephone Company, Jacksonville, Ill. for December 24th, 1920

### They had—

On the old board and under the old operating schedule:  
 10 positions, 23 operators on local payroll, 2300 stations, and an average day's traffic of 14,000 calls.

### Now they have—

On the new Kellogg Service Switchboard:  
 7 positions, 15 operators on local payroll, 2800 stations and an average day's traffic of 23,000 calls.

If the old switchboard was in use today it would require 38 local operators on the payroll. As a result of the Service Switchboard they are saving the pay of 23 operators, or approximately \$13,800.00 per year.

# What a KELLOGG Service Board Will Do

—3—

THE ultimate telephone service demanded by the public, is defined by them as being—an immediate answer, a quick connection with the called party, a perfect conversation, an immediate disconnect and recall.

In the KELLOGG Service Switchboard there has been incorporated, those features that make it possible to give the public that service. In our booklet entitled "An Engineer's Outline of Kellogg Service Superiority," those features are discussed fully.

The KELLOGG Service Switchboard is a money making, money saving proposition to the exchange owners and stockholders. It is the means of giving the subscriber, fast, efficient service.

In brief, the KELLOGG Service Switchboard promotes good will between management and subscriber, faster service at less cost; and a material increase of profits.

On the following pages you will see the results of the fine service that Warren, Ohio, gives to "Friend Subscriber."

*File this report as it is the third of a series of similar reports that will be sent to you with Telephone Facts each month.*

*March, 1921*

# Over Twelve Million Calls in Nineteen-Twenty!

(Actually 12,632,278)

TRAFFIC DEPARTMENT				DATE <u>1920.</u>												OFFICE OF WARREN & NILES TELEPHONE CO	
				POS. 9	POS. 10	POS. 11	POS. 12	POS. 13	POS. 14	POS. 15	POS. 16	POS. 17	POS. 18	TOTAL	1920 NO. OF POS. OPRS.		
				Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	
1.	Total	CALL - ANSWERED - DURING 1920 (No. 3)	7 A.M. to 9 P.M.	787,857	926,356	1,046,775	998,618	904,320	960,791	863,392	878,034	886,388	1,007,298	966,497	1,009,597	11,435,919	12,632,278 Total 1920
2.	Total	" " " " " Sundays & Holidays	7 A.M. to 9 P.M.	84,139	87,681	63,330	60,347	88,973	49,014	61,928	57,175	63,362	72,160	76,746	77,970	842,825	
3.	Total	" " " " " nights	9 P.M. to 7 A.M.	29,635	27,790	41,870	29,958	27,129	28,823	25,898	26,341	26,591	30,218	28,994	30,287	353,534	
4.	Total	number local operators hours Jr. and Sr.		2,699	2331	2,459	2,463	2,499	2,554	2,618	2,574	2,345	3,750	3,388	3,287	32,967	
5.	Total	number local student opers. hours Jr. & Sr.		251	632	780	809	936	1,100	972	716	608	328	108	142	2,436	
6.	Avg.	number of calls answered per hour per operator.		358	365	385	362	322	321	294	312	367	261	285	312	(328 + <i>Jan. only</i> )	

Item 5 and 6 of unit three equal the total Jr. & Sr. local operators hours also the student total No. of hours therefore in computing the productive hours or rather the number of calls answered per hour per operator, it is necessary to take in to consideration production taking 33% of the total student operators hours will equal a fair production, 33% added to the Jr. & Sr. hours equals the total hours less Sundays Holidays and nights.

Average Busy Hour Calls, per Operator, January 1921—420.  
Average Number of Calls per Operator, per hour—328

Real Telephone Service as illustrated by Every Day Records at Warren, Ohio.

Dec.	Answered	No. Opr.	Busy Days
1	3,843	10	
2	3,660	10	
3	3,359	10	
4	4,041	11	
5			
6	3,454	10	
7	3,908	10	
8	3,970	11	
9	3,460	10	39,024
10	4,264	11	41,065
11	3,908	10	
12			
13	3,965	10	41,275
14	3,894	10	40,065
15	4,616	11	39,522
16	4,049	10	39,293
17	4,437	10	40,013
18	4,827	11	
19			
20	3,979	10	40,933
21	4,244	10	
22	3,872	10	40,640
23	4,006	10	41,438
24	5,773	11	42,787
25			
26			
27	3,374	8	
28	3,733	9	
29	3,831	9	
30	4,855	11	40,282
31	4,617	10	46,433
	105,939		532,770

The very fine December summary—as noted by the Warren management—is of relatively quiet days.

Average number of subscribers December, 1920.....	5,425
Number of lines on switchboard, January 1.....	1,607
Calls for December, total.....	1,117,849
Busy days for December, average.....	40,982 (13 days)
Average busy hour for December.....	4,074 (26 days)
Average daily load for December.....	38,830 (26 days)
Number of local operators chargeable to local.....	20
Information.....	1½
Night local.....	1½
Supervisors, local.....	2
<b>Total.....</b>	<b>25</b>

This Kellogg Service Board, six years installed, has all the Kellogg "Ultimate Service" features.

And Their January Record—

(Up to the time of this report)

The present average per hour per operator position, less Sundays and Holidays.

		7 A. M. to 9 P. M.			
		Av. Per Hr.			
Jan. Total Ans.	No. of Pos. Opr.	Per Opr.	Busy Hour	Avg.	
1/3	39,701	98	405	3936	463
1/4	37,821	114	325	3258	362
1/5	37,503	99	378	3753	415
1/6	33,120	89	383	3384	423
1/7	34,509	103	344	3845	422
1/8	34,324	90	381	3511	379
1/10	37,506	98	382	3286	386
1/11	37,168	103	360	3753	411
1/12	35,298	94	375	3716	412
1/13	34,114	89	383	4043	449
1/14	39,582	96	412	3705	411
1/15	37,305	91	410	4308	536
1/17	35,094	92	370	3579	445
1/18	33,251	93	358	3312	414
1/19	30,375	86	353	3044	380

# What a KELLOGG Service Board Will Do

—No. 4—



How does *your* plant compare with this Grand Rapids, Wisconsin, exchange, with its 1600 subscribers? With their force of 3 local operators and 1 local and rural, they are handling an average of 11,491 calls per working day. Will service of this type help you? If you are interested and would like more information, write us.

*File this report as it is the fourth of a series of similar reports that will be sent to you with Telephone Facts each month.*

We have a supply of these reports on hand for distribution to those who are interested. If you do not have the complete series of reports to date, write us and we will gladly send you the missing issue.

April, 1921

Are you interested in service the public appreciates?

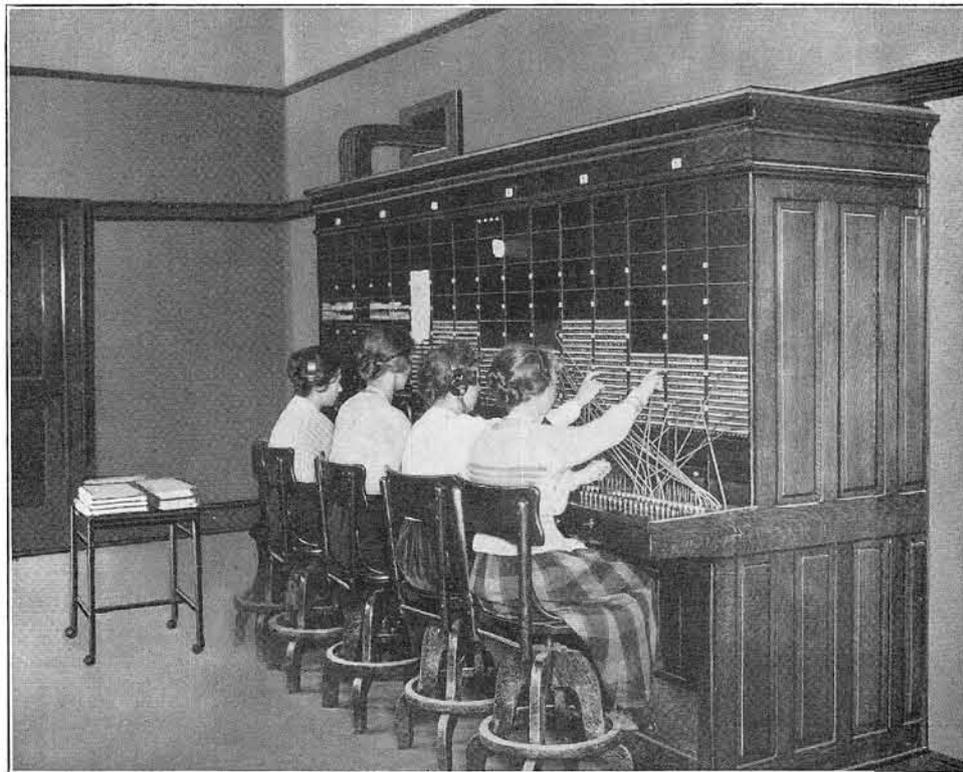
Are you operating a common battery exchange?

Are you interested in what is positively the most efficient telephone switching?

Are you interested in that efficient service that assures a most excellent business proposition; that many of our customers, from their actual bookkeeping records can show the very best financial statements and economical, practical operating which must go with such income-producing figures?

Nothing about the Kellogg Service board is experimental. Every feature has been tried out for a term of years. One company discontinued the Instantaneous Recall and Disconnect for two weeks. Immediately the change was noticed by the telephone users.

These figures, the fourth in our series of Kellogg Service switchboard result-producing data, appearing with Telephone Facts each month, are from Grand Rapids, Wisconsin, a town of 9,000 population.



This Kellogg Service switchboard is now serving 1,600 subscribers. It is a six position board, two positions toll, one position combined rural and local (the operator on this position devotes half her time to rural and half to local traffic during the busy hour) and three positions local.

The average operating force is ten operators, which includes one chief operator, one assistant chief operator, one substitute operator and seven local and rural operators. Toll operators are not included.

The noteworthy character of this service is indicated in the total records for December and the first nine days of January, when these notes were made. This load increases frequently 25% over the figures given.

### *Average of 11,491 calls per working day*

Grand Rapids peg count sheets show an average of 11,491 calls per working day (omitting Sundays and holidays) with three and one-half positions handling the traffic and giving a service which is the pride of every citizen of this city.

### Total Records for the month of December, 1920

December 1st .....	9,297	December 17th .....	10,502
" 2nd .....	10,669	" 18th .....	12,770
" 3rd .....	10,860	" 19th .....	6,016
" 4th .....	8,871	" 20th .....	12,785
" 5th .....	5,659	" 21st .....	12,741
" 6th .....	10,447	" 22nd .....	12,894
" 7th .....	10,531	" 23rd .....	13,500
" 8th .....	10,483	" 24th .....	13,688
" 9th .....	10,897	" 25th .....	8,145
" 10th .....	11,530	" 26th .....	6,817
" 11th .....	12,051	" 27th .....	11,618
" 12th .....	5,535	" 28th .....	11,225
" 13th .....	11,841	" 29th .....	11,805
" 14th .....	12,417	" 30th .....	11,567
" 15th .....	11,882	" 31st .....	15,195
" 16th .....	10,039		
		Total .....	334,277

### —for the first nine days of January, 1921

January 1st .....	8,409	January 6th .....	10,293
" 2nd .....	7,401	" 7th .....	11,014
" 3rd .....	11,626	" 8th .....	12,042
" 4th .....	10,181	" 9th .....	6,073
" 5th .....	11,881		
		Total .....	88,920

The approximate total calls handled in 1920 was 3,720,000. Any visitor in Grand Rapids who takes the slightest trouble to inquire, will find that every one is delighted with the service given.

# They Are Pushing Their Peg Count Up—

—No. 5—

WARREN & NILES  
TELEPHONE COMPANY

105 South Park Avenue

Warren, Ohio.

April 13, 1921.

Mr. H. D. Currier, Chief Engr.,  
Kellogg Switchboard & Supply Co.,  
Chicago, Illinois

Dear Mr. Currier:

Enclosed please find peg count data for first quarter of 1921.

I am going to make a try for an average of 400 or better per position per hour, and 500 average during the busy hour. The above 400 to be the average of the business between 8 A. M. and 5 P. M. which would cover the business hours.

The enclosed averages cover the total period 7 A. M. to 9 o'clock P. M.

My idea is to positively show that an average of over 375 can be maintained day after day, likewise month after month.

Yours very truly,

Signed, R. F. PAGELS,

Traffic Supt.

RFP/MEG

WARREN & NILES, TELO. CO.

## THESE WARREN, OHIO, PEG COUNTS SPEAK FOR THEMSELVES

Even faster service is soon to be inaugurated.

They now are endeavoring to increase these extraordinary busy hour service records, to 500 calls per hour.

The ease and speed with which calls can be handled on a Kellogg Service board permits the inauguration of this plan of unprecedented busy hour service.

That the subscriber and telephone user might be given service of the highest degree, there was incorporated in the switching equipment the Ten Cardinal Features. (On page four of this insert you will find a brief description of each of these.)

These peg counts are conclusive proof of "What a Kellogg Service Board Will Do."

### JANUARY, 1921.

Average number of calls answered per position operator per hour—**374**.  
Average number of calls answered per position operator during busy hour—**410**.

Average per hour per position operator less Sundays and Holidays. 7 A. M. to 9 P. M.

	Total Ans.	No. of Opr. Hrs.	Average Per Opr. Per Hr.	Busy Hour	Average
1/3	39,701	98	405	3,936	463
1/4	37,921	114	325	3,258	362
1/5	37,503	99	378	3,753	415
1/6	33,120	89	383	3,384	423
1/7	34,509	103	344	3,845	422
1/8	34,324	90	381	3,511	379
1/10	37,506	98	382	3,286	386
1/11	37,168	103	360	3,753	411
1/12	35,298	94	375	3,716	412
1/13	34,114	89	383	4,043	449
1/14	30,582	96	412	3,705	411
1/15	37,305	91	410	4,308	536
1/17	35,094	92	370	3,579	445
1/18	33,251	93	358	3,312	414
1/19	30,375	86	353	3,044	380
1/20	33,228	92	372	3,576	397
1/21	37,247	103	361	3,613	401
1/22	36,393	96	379	3,484	387
1/24	36,094	99	364	3,718	413
1/25	34,610	97	358	3,433	381
1/26	34,077	91	374	3,362	320
1/27	35,196	94	363	3,435	381
1/28	35,552	96	380	3,526	391
1/29	33,820	83	311	3,650	456
1/31	39,390	96	410	3,695	437
Total	892,378	2382	9,291	89,925	10,272

### FEBRUARY, 1921.

Average number of calls answered per position operator per hour—**363**.  
Average number of calls answered per position operator during busy hour—**417**.

Average per hour per position operator less Sundays and Holidays. 7 A. M. to 9 P. M.

	Total Ans.	No. of Opr. Hrs.	Average Per Opr. Per Hr.	Busy Hour	Average
2/1	35,150	93	378	3,503	412
2/2	35,072	91	386	3,776	459
2/3	36,200	101	358	3,440	382
2/4	33,895	97	350	3,601	400
2/5	38,935	103	378	4,118	457
2/7	38,695	101	383	3,677	408
2/8	35,339	97	363	3,698	410
2/9	33,894	99	341	3,369	374
2/10	35,286	98	360	3,796	423
2/11	35,060	100	350	3,839	427
2/12	33,890	97	349	3,663	407
2/14	36,228	98	369	3,631	403
2/15	34,963	97	360	3,106	414
2/16	33,624	99	349	3,004	375
2/17	36,166	100	361	3,879	433
2/18	34,159	94	395	3,559	418
2/19	34,469	91	378	3,569	410
2/21	37,346	103	362	3,585	421
2/23	35,603	101	355	3,613	425
2/24	34,719	99	350	3,901	459
2/25	35,604	93	382	3,661	486
2/26	33,933	93	397	3,695	434
2/28	36,901	100	369	3,278	354
Total	815,131	2245	8,423	82,961	9,591

### MARCH, 1921.

Average number of calls answered per position operator per hour—**371**.  
Average number of calls answered per position operator during busy hour—**429**.

Average per hour per position operator less Sundays and Holidays. 7 A. M. to 9 P. M.

	Total Ans.	No. of Opr. Hrs.	Average Per Opr. Per Hr.	Busy Hour	Average
3/1	36,405	97	375	3,820	449
3/2	34,608	94	368	3,424	456
3/3	38,064	105	362	3,575	420
3/4	35,044	100	350	3,474	314
3/5	36,189	101	358	4,448	468
3/7	35,416	94	376	3,325	372
3/8	35,456	97	365	3,738	439
3/9	35,591	98	363	3,304	367
3/10	34,154	94	363	3,694	434
3/11	34,289	95	360	3,474	408
3/12	38,395	100	383	4,017	422
3/14	38,921	99	393	3,852	453
3/15	37,822	95	398	3,889	457
3/16	36,686	99	361	4,234	470
3/17	36,300	92	394	3,792	474
3/18	37,922	97	390	3,812	448
3/19	34,569	93	414	4,120	433
3/21	37,444	104	360	3,528	371
3/22	37,444	100	374	4,010	445
3/23	36,352	97	385	3,656	457
3/24	37,592	101	372	3,642	383
3/25	36,282	102	355	3,398	357
3/26	36,464	91	400	4,213	443
3/28	37,061	100	370	3,679	432
3/29	38,458	98	402	4,322	457
3/30	38,837	98	406	4,181	491
3/31	38,440	96	400	3,964	466
Total	990,205	2637	10,197	102,585	11,586

Average number of calls answered per position operator per hour for the first quarter year 1921—**371**.  
Average for busy hour during first quarter . . . . . **418**.

# What a KELLOGG Service Board Will Do

==== No. 6 =====

*Meadville*

*Pennsylvania*

“The day of the big flood  
this company’s operators  
answered 20,000 calls”.

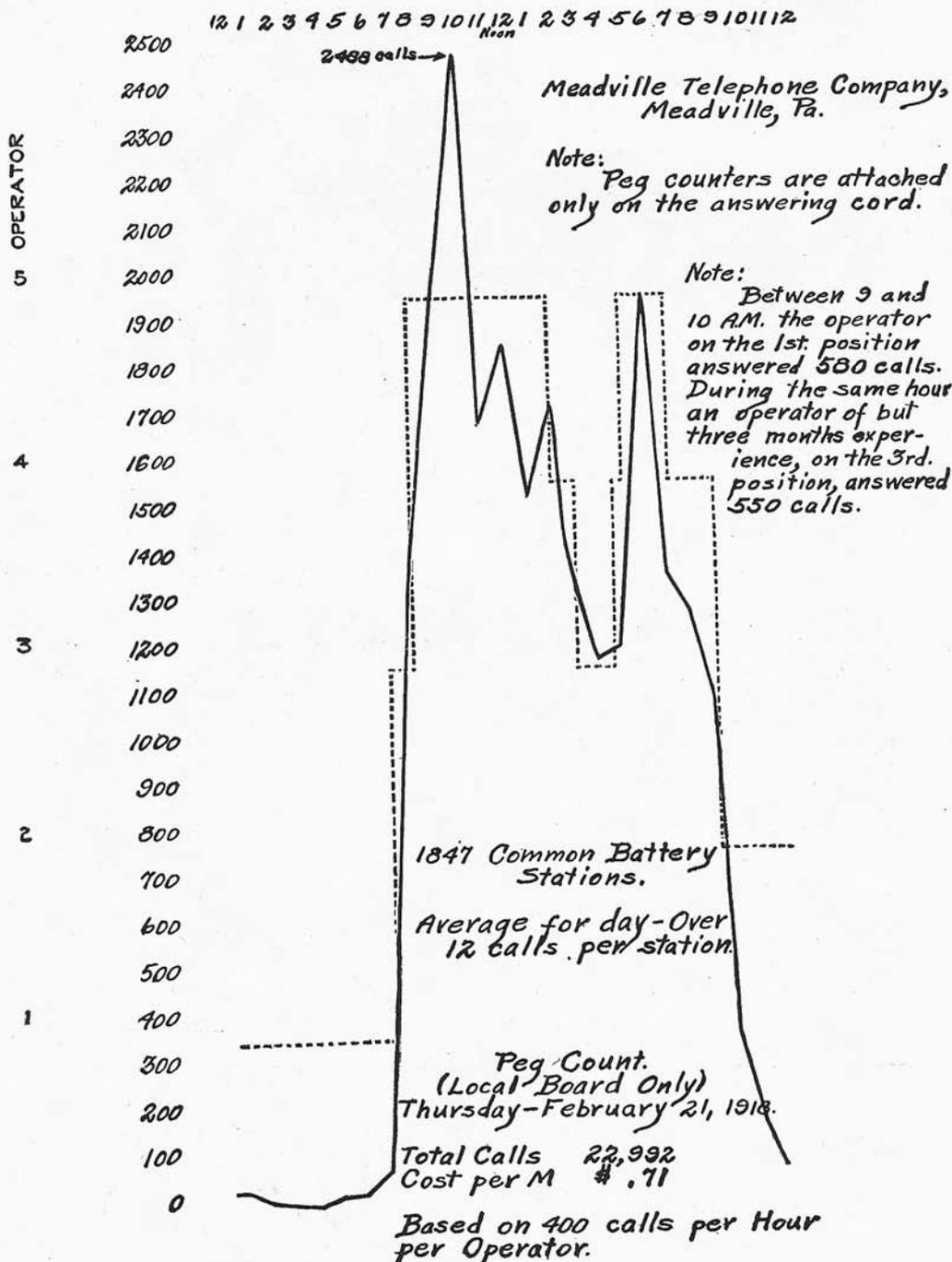
¶ File this report as it is the sixth of a series of similar reports  
that will be sent to you with Telephone Facts each month.

The Meadville exchange has a multiple line lamp board equipped with automatic listening, secret service, automatic ringing, revertive ringing tone, ring-controlled calling party, instantaneous disconnect and line lamp recall, dark key-shelf, non-interfere answering and register peg count.

Hours	Sept. 4, 1920		Oct. 19, 1920		Nov. 12, 1920		Dec. 24, 1920		Dec. 31, 1920		Feb. 11, 1921		Average Calls
	Calls	Oper's.											
2-1	16	1	24	1	14	1	48	1	21	1	33	1	26
1-2	11	1	22	1	21	1	21	1	29	1	28	1	22
2-3	11	1	22	1	22	1	34	1	23	1	17	1	22
3-4	9	1	31	1	27	1	32	1	33	1	28	1	27
4-5	7	1	29	1	31	1	12	1	39	1	19	1	23
5-6	13	1	22	1	31	1	22	1	36	1	30	1	26
6-7	54	1	44	1	56	1	62	1	23	1	35	1	46
7-8	458	2	392	2	285	2	361	2	232	2	271	2	333
8-9	828	3	845	3	890	3	965	3	696	3	640	3	810
9-10	1,249	4	1,083	4	1,355	4	1,205	4	1,340	4	1,012	4	1,207
10-11	1,171	4	864	4	1,033	4	1,240	4	1,317	4	981	4	1,096
11-12	1,132	4	873	4	1,145	4	1,189	4	1,207	4	904	4	1,075
12-1	863	4	867	4	797	4	1,077	3	1,528	4	729	3	977
1-2	1,201	4	1,102	4	1,131	4	1,344	4	1,078	4	947	4	1,134
2-3	778	3	743	3	808	3	1,067	3	1,447	4	738	3	930
3-4	697	3	610	3	817	3	1,146	3	795	3	672	3	790
4-5	659	3	678	3	820	3	874	3	1,093	3	674	3	799
5-6	767	4	740	3	893	4	936	3	1,353	4	837	4	921
6-7	684	4	840	4	720	4	1,021	3	1,050	4	638	4	826
7-8	843	3	758	3	704	3	874	3	953	4	570	3	784
8-9	472	2	349	2	348	2	453	2	486	2	398	2	418
9-10	302	2	177	3	201	2	454	2	338	2	262	2	289
10-11	159	1	35	1	64	1	154	1	45	1	99	1	93
11-12	46	1	29	1	54	1	41	1	31	1	36	1	40
Daily Total	12,430	58	11,179	58	12,237	58	14,632	55	15,193	60	10,598	57	12,714

Present operating force consists of one chief operator, one assistant chief operator, two night operators, two toll operators, two rural operators, six local operators and one relief operator.

# Typical Kellogg Service Board Peg Count



Black Line—Number of calls.

Dotted Line—Number of Operators.

# What a KELLOGG Service Board Will Do

==== No. 7 =====

## Over 1,284,000 Calls Per Month

391 calls average per operator for busy hour period.  
Taking in consideration the trunk calls  
this average would be 412.

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### LONG BEACH, CALIFORNIA

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This 21 position Kellogg Switchboard is arranged as follows:

14 Local positions rehabilitated with the following features.

Keyless listening, Non-Interfering answering, Secret Service, Machine Ringing, Revertive Ringing Tone, Ringing Control, Instantaneous Disconnect on Answering Cord, Dark Key-shelf, Peg Count on Answering Cord.

- 2 Local switching positions.
- 2 Toll switching positions.
- 1 Hospital position.
- 1 Pay Station position.
- 1 Multiple Marking position.

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### *Positive, Unequaled Advantages of a KELLOGG Service Board*

Gives a far better subscriber service:

People who know, are demanding it.

Sound, practical engineering:

Over two hundred in service prove it.

Great saving in first cost over any other switching system that can compare:

Find out what other systems cost.

Low maintenance, long life, economy in operating:

We have interesting records prepared by managers to bear out these statements—operating expenses reduced one half in many cases.

July, 1921

# Fourteen Local Positions Handled 1,284,361 Calls During Month of May from 6:00 A. M. to 10:00 P. M.

(EXCLUDING SUNDAYS AND HOLIDAYS)

	No. of Calls	No. of Calls During Busy Hour	Operators During Busy Hour	Aver. per Operator		No. of Calls	No. of Calls During Busy Hour	Operators During Busy Hour	Aver. per Operator
May	2, 55207	5502	14	393	May	16, 51651	5179	14	369 $\frac{3}{14}$
"	3, 51222	5519	14	394 $\frac{3}{14}$	"	17, 48923	4937	14	352 $\frac{9}{14}$
"	4, 50129	5422	14	387 $\frac{2}{7}$	"	18, 49576	5606	14	400 $\frac{3}{7}$
"	5, 53368	5799	14	414 $\frac{3}{14}$	"	19, 50917	5632	14	402 $\frac{3}{7}$
"	6, 51859	5909	14	422 $\frac{1}{14}$	"	20, 51889	5269	14	376 $\frac{5}{14}$
"	7, 47724	5081	14	362 $\frac{13}{14}$	"	21, 49532	5460	14	390
"	9, 51949	5487	14	391 $\frac{13}{14}$	"	23, 54851	5862	14	418 $\frac{5}{7}$
"	10, 50829	5505	14	393 $\frac{3}{14}$	"	24, 53044	5763	14	411 $\frac{9}{14}$
"	11, 50829	5452	14	389 $\frac{3}{7}$	"	25, 52743	6059	14	432 $\frac{11}{14}$
"	12, 49766	5059	14	361 $\frac{5}{14}$	"	26, 52950	5735	14	409 $\frac{9}{14}$
"	13, 51574	5213	14	372 $\frac{5}{14}$	"	27, 53087	5339	14	381 $\frac{5}{14}$
"	14, 47227	5218	14	372 $\frac{5}{7}$	"	28, 53087	5305	14	378 $\frac{13}{14}$
					"	31, 54344	5872	14	419 $\frac{3}{7}$

The total number of calls for the busy hour period for the month were - - - 137,184

Over 10% or 13,813 were trunk calls, requiring half again the time of an ordinary call.

Each operator averaged 391 calls per busy hour for the month.

The high daily average being May 25th - 432

Of the total number of calls 1,284,361, nearly 12½% or 157,055 were trunk calls.

These remarkable results were produced on this Kellogg straight answering jack board at Long Beach, California, which is equipped with the Kellogg features described on the front page.

This board was installed in 1903, the rehabilitation made in 1916 and additions completed in 1919.

This is another proof of the accomplishments of Kellogg Service Switchboards.

This straight answering jack board averaged 55,330 calls per day for May.

During the busy hour each operator averaged 391 calls or taking into consideration the trunked calls this average would be equivalent to 412.

This saving in operating cost and maintenance of the Service board is only one feature, and the fast service which your subscribers not only like, but demand is another, resulting in a well liked, highly successful exchange.

Find out what the Service board can do for you, from both service and money saving standpoints.

We will gladly furnish you with any information or engineering without charge and show you the saving possible with this type of equipment for your exchange.

USE IS THE TEST

**Kellogg Switchboard & Supply Company**  
CHICAGO, ILLINOIS