



QST

A Magazine Devoted Exclusively to Amateur Radio

The Story of The Transcons.

By K. B. Warner

FELLOWS, we did it! Smashed it into bits—just naturally lambasted the everlasting stuffing out of it! “Aint it a grand an’ glorious feeling?” It is! Tiddle-de-da-de-doo!, as our prize rooster Geschnell crowed when he put the final licks in.

Do you ask why all these screamers? Be it known to you, Fellow A.R.R.L. Members, that this little old organization of ours created some glorious additions to the history of Citizen Wireless in the Transcontinental Relay Tests of middle January, when we broke the previous record so badly that you’ll never even find the pieces. We put one across and back in six and a half minutes! It was truly F.B. In the weeks that have since passed we have managed to make up a little of our lost sleep and are gradually coming back to earth, so that now we can take up the reports and see just how we accomplished these things that brought joy and pride to the heart of every A.R.R.L. man. So, from a vast pile of reports received at Headquarters, the story is slowly being put together. There are still places to be heard from and some blanks still exist in our story, but for the most part we now know how the messages moved and are able to present the tale in order that we may study it and take lessons therefrom for our next attempt.

The plans for the transcons were first announced in the December QST and the schedules appeared in the January number. It will be recalled that the scheme was to have relays for several nights in a row, with several messages going each night, not only so that all parts of the country might participate but because the QRM made it more realistic and would give a better test of just what we could do. During these first few nights, too, the relay machinery would be getting into smooth running and the unintentional interferers would be rounded up, so that

conditions would be well lined up for a pure speed test on the final night. Our entire League seemed to enter wholeheartedly into the idea, and great interest was manifested everywhere. All the Division Managers and their helpers worked hard on the job, local organizations assisted in spreading the news and preparing local QRM-control to make operating easier, and the individual station owners were full of enthusiasm to a man, not only those who were on the routes but those whose chief duty it was to keep quiet. In addition to this splendid co-operation from the organization we were blessed with almost perfect weather over the eastern two-thirds of the country.

The results of the tests are now history, but a glorious history it is. All amateur records went to smash before our almost perfectly-working machine and indeed during these tests we broke our own records almost as fast as we could establish them. The copies of the logs sent into headquarters tell a most interesting story in every case, and the operators who listened in on these nights have a record of radio history in its making.

In all our transcontinental tests the scheme has been to put a message from one coast to the other and get back an answer—a round trip. Therefore unless a reply is actually returned to the point of origin we cannot count it a success, regardless of how quickly the message may have moved across the country one way. Nor when they become badly garbled in transit can they be counted successful, regardless of the speed. Of the messages between Portland, Me., and Portland, Ore., two completed the round trip OK, and one of them would have surpassed our long-standing record of 1 hour 20 mins. if the signature hadn’t been garbled. Two of the three messages between Hartford and Los Angeles were completed, one of which established a good improvement on our

old record. Of those between San Francisco and Boston, only one can be counted a success. Transcons 4, between Ellendale, N. D., and New Orleans, were child's play, on two nights hanging up figures of 27 and 28 minutes for the round trips. On the last night a series of messages was handled between Hartford and the west coast, and new figures of 23 mins., 13½ mins., 7¾ mins., and finally 6½ mins., were established!

We have concluded that the best way to set forth the story is to tell briefly what happened to each message. It must be borne in mind that our data are not complete, that reports from some of the stations conflict, and that there will unquestionably be little inconsistencies in the record, with credit omitted where credit is due and unintentionally placed where it does not belong. Our readers are asked to fill in the missing links or correct any errors they observe, in order that our official record may be a true one. It will be noted that in many cases the messages did not move as scheduled, and that when apparently "stuck" some unscheduled station who had copied it leaped into the breach and QSR'd without actually communicating with the station from which it had been copied. We wish to explain that in our presentation of how the messages traveled we are listing what appears to be the correct route over which they actually moved to their destination, and such records will not show all the stations to whom a message was forwarded for relay.

FIRST NIGHT—Jan. 14-15

No. 1. Figures in Eastern Standard Time. "Transcon 15 msg nr 1, Portland, Me., to The Mayor of Portland, Ore. Portland, Maine sends greetings to her big sister of the Pacific Coast.—Charles B. Clarke, Mayor." This message apparently started from Portland, Me., promptly at 1 o'clock via 1FV, moving to 1DY. 1BBL couldn't hear 1DY, so 1AW connected up 1DY and 2RK. The latter got it and passed it to 9ZN at 1:25, who gave it to both 9JN and 9WU. 9WU started it to 7ZG, but 7CC copied it direct from 9WU, QSL'd, and passed it on to 7DA in Portland at 1:35. Actually moved: 1FV-1DY-2RK-9ZN-9WU-7CC-7DA.

The reply, leaving Portland via 7DA at 1:40, read "Transcon 15 reply nr 1, Portland, Ore., to Mayor, Portland, Me. The mayor of Portland, Ore., reciprocates the kind greetings from Portland, Me., in true western spirit.—Geo. Baker." This went to 7CC, to 7ZG at 2:05, to 9WU at 2:25. 9ZN was busy, and 9WU gave it to 9ZL at 2:27. 9ZL gave it to 2SZ after failing to get 9ZN, but it got no further until 9WU repeated it to 9ZN at 2:35. 9ZN then started it to 2RK, but 1AW copied

all of it direct except sig. 9ZN heard 1AW asking 2RK for the sig., and shot it again, making the transmission direct 9ZN to 1AW at 2:47. Meanwhile 1FV was QRX, and 1AW immediately started to him. Some repeats were necessary, and 1TS rendered valuable help to 1AW in copying 1FV's weak and fading signals. His QSL was received at 3 o'clock, at which time 2RK had just succeeded in getting it to 1DY too, but as 1FV was Portland itself, 1DY cancelled. Actually moved via: 7DA-7CC-7ZG-9WU-9ZN-1AW-1FV.

Elapsed time, 2 hours flat.

No. 2. Figures in Eastern Standard Time. 1AW had the following: "Transcon 15 msg nr 2, Hartford, to Managing Editor, Los Angeles Times, Los Angeles, Cal. Hartford Courant, America's oldest newspaper, sends greetings by wireless to one of greatest papers in west—Managing Editor, Courant." 2RK QSL'd this at 1:08, and 8ZW, who had copied from 1AW, gave him an immediate QSL and broke to 5YH. Meanwhile BCO had copied 1AW and QSR'd to 9LR, who in turn gave it to 6IG, and logs received seem to show that 6IG was heard calling 6JD. However, the message never got thru. In some manner 5ZA picked it up and passed it on to 6ZH about 1:30, but it does not seem to have got past 6ZH. This attempt was a failure, but the effort to get thru and back made some new members for "The Boiled Owl Club", for many of us sat up waiting for that message until the sun was up. Tracers were started out and it was learned later that it had been hours getting across the mountains. 9ZN and 9LR and 1AW stayed on the job until 1 a.m., with the air quiet and the route open as far as the Rockies, but the reply did not return.

No. 3. Pacific Standard Time. Promptly at 10 o'clock 6ZE gave 6BJ the following message: "Transcon 14 msg nr 3, San Francisco, to Boston American, Boston, Mass. Greetings good luck for 1921 from the far west paper of the Hearst chain.—San Francisco Examiner." 6BJ gave it to 6ZO, and he to 6ZM at 10:08, but the latter was never able to get rid of it because his wave, 375 meters, was higher than the bunch were listening on. 6IG came to the rescue, altho we don't know where he got his copy, and forwarded to 5ZA, thence to 9LR, and so to BCO at 10:15. Fifteen minutes from Frisco to St. Louis! BCO gave it to 8ZY at 10:19, but the eastern stations were all busy with Nr. 1 and Nr. 2, and 8ZY had to hold it—like a hot potato. 8ZL had copied it and was heard trying to give it to 2RK at 10:35, but QRM. 8ZY passed it to 8ZW, whose very-QSA signals clipped thru the jam and deposited it safely at 1AW at 10:44. 1AW called 1DY and 1CK with it, and with the valiant help of 1TS secured a

QSL from 1DY at 2 o'clock, making one hour across. Actually moved via: 6ZE-6BJ-6ZO-6IG-5ZA-9LR-BCO-8ZY-8ZW-1AW-1DY.

1DY had difficulty in securing a reply—somebody up that way seemed to object to being disturbed at that hour of night to answer the message. It even looked at one time like the effort would have to be abandoned, but 9ZN reported both routes were open to the coast and for the love of Mfd. couldn't we get an answer? Oh Boy but it is inspiring to hear that roll in over the air: "Both routes open to coast"! 1DY decided it MUST be done, and at 1:47 started reply to 1AW, which was copied with the assistance of 1TS. This read: "Transcon 14 reply nr 3, Boston, to San Francisco Examiner, San Francisco. Your wireless greetings received. It's a long way from Mass. to the Golden Gate and good wishes for your success this year.—Boston American." 1AW popped this to 9ZN and got his QSL at 1:53, but 9LR had copied 1AW direct and immediately started to 6JT with it. It never finished, and further routing is unknown.

This attempt must be called a failure.

No. 4. Central Standard Time. 9WU gave the following to 9JN at 11:07: "Transcon 14 msg nr 4, Ellendale, N. D., to New Orleans Item. Cotton planters join National Farm Bureau.—Leader." BCO intercepted it and passed to 5YH, who gave it to 5ZP at 11:15—eight minutes. Mr. Chesser, of the "New Orleans Item", hardly knew how to reply to such a message, and in error the answer was addressed to Hartford instead of Ellendale. It read: "Transcon 14 reply nr 4, New Orleans, to A.R.R.L., Hartford, Conn. Msg recd congratulations on good work.—Chesser Item New Orleans." 5ZP gave this to 5YH, thence to BCO at 11:34, 8ZL at 11:41, thence to 2RK and from him to 1AW at 12 midnight. Being wholly unexpected, 1AW didn't know what to do with this message or what it meant, and indeed it seems most of the bunch thought it was phony and the work of some practical joker who was trying to give us a reply to Nr. 2 before it started. 1AW asked 2RK how it had come, and the redoubtable "KH" answered with a laconic Morse "C" and asked 8ZL from whence came this specimen. The lady promptly gave the full routing—5ZP-5YH-BCO-8ZL—and then it was evident that a mistake had been made and that this was indeed the reply to Nr. 4. Altho misrouted it still embodied a good performance: Ellendale to Hartford via New Orleans in 53 minutes.

Special. Eastern Standard Time. While we were all waiting for the reply to Nr. 2 to come back and for Boston to frame an answer to Nr. 3, the Traffic Manager

decided to try a special from 1AW, since the routes seemed open and conditions better for getting thru than they had been for years. Accordingly, at 4:13 1AW gave 9ZN the following: "Transcon 15 Special, Hartford, to Bessey, 6ZK. Temperature thirty weather clear here this morning hews Sunnyvale.—Maxim". 9ZN QSL'd at 4:14, broke immediately to 9LR, who in turn QSL'd at 4:15—as pretty work as you could want to hear. 9LR apparently got it to 6JT at 4:20, but it did not get thru and its further history is unknown.

This was pretty good for the first night. In the east we were crippled by the absence of 1HAA, who had antenna trouble, but it was seen that with more stations on the job and QRM a little better under control, we could do big things. The co-operation was wonderful. 1AW maintained constant communication with 9ZN from 2 a.m. to 7 a.m. with all the ease of local work and not the least bit of fading until 6:45 when the sun began to rise in Hartford and 9ZN began to weaken rapidly.

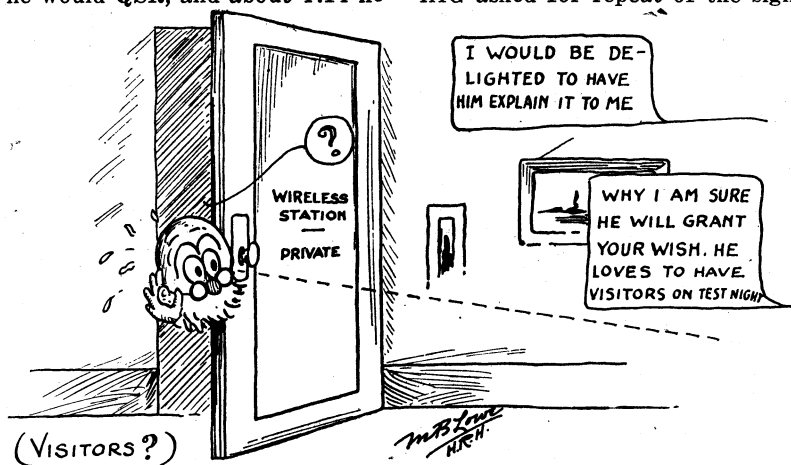
SECOND NIGHT—Jan. 15-16

No. 1. Eastern Standard Time. This message was "a regular book": "Transcon 16 msg nr 1, Portland, Me., to W. D. B. Dodson, Secretary, Chamber Commerce, Portland, Ore. Best greetings for 1921 from Portland, Me., Chamber Commerce to Chamber Commerce, Portland, Ore. Thus far we are enjoying a very open winter; very little snow; no severe cold.—E. H. McDonald, Executive Secretary." This presumably left Portland about 1 o'clock via 1FV, moving to 1CK, who gave it to 1AW at 1:45. 2RK was on too, and signified he had it OK direct by calling 9ZN, so 1AW QSL'd to 1CK and started giving him Nr. 3 for Boston while 2RK attempted to put Nr. 1 west. 9ZN gave it to 9WU, but 9WU couldn't get rid of it. No one was on west of him, and altho he broadcasted it he got no QSL. This was fortunate, however, as 2RK had lost part of it. 8ZW had copied more than that direct from 1CK, he told 2RK, and considerable chewing took place up past 2 o'clock. As 8ZW said in horror: "Nr. 1 going west with two thirds lost and 9ZN don't know the difference". "WO" must have thought it was long enough as it was. 8ZW, 8ZY, 2RK and others of the gang were running around in circles until 8ZW gave the correct copy to 8ZY at 1:56, and the latter finally succeeded in getting 9ZN's ear at 2:10, from whence it moved to 9LR, and to 6ZH at 2:36. 6ZH gave it to 6ZM but was copied direct by 6ZO, who gave it to 7DA in Portland at 2:45. The central route scores on this one, and a hard message it was, too. Actually moved: 1FV-1CK-8ZW-8ZY-9ZN-9LR-6ZH-6ZO-7DA.

7DA's reply read: "Transcon 16 reply nr 1, Portland, Ore., to E. H. McDonald, Portland, Me. Greetings; enjoying no winter at all.—Van Duzen." At 2:53 7DA had this at 6ZO, whence it moved via 6ZM, 6ZH, and from there direct to 9WU in a splendid jump at 3:35, thence to 9ZN at 3:50. 9ZN started with 2RK with it, but the latter having QRM and 1TS (close to 1AW) having copied it, 1AW told 2RK to OK it to 9ZN, which was done at 3:54. 1AW then got the message from 1TS and, 2RK working east with greater ease than 1AW, gave it to 2RK at 3:57. This was a pretty late hour, and 1CK had hung up. 1ES was heard for a moment at 1AW, but ND at 2RK. At 4:09 2RK raised 1JBT, who said he would QSR, and about 4:14 he

trying to get it from 5ZP, and 9LR, off schedule, trying to put it thru to some 6. Finally 5ZA got it thru a lull in the din at 1:45, passed it to 6IG at 1:49, and from there on its record is obscure, altho it got thru OK. Actually moved via: 1AW-2JU-8ZW-5YH (?) -5ZP-5ZA-6IG-???

6EN gave the reply to 5ZA about 2:20, reading: "Transcon 16 reply nr 2, Los Angeles, to Newton C. Brainard, Hartford, Conn. Hearty congratulations on the success of the transcontinental test.—M. P. Snyder, Mayor, Los Angeles." From 5ZA this went to 5YH, then to 5XA at 2:29. 5XA endeavored to give it to 4AG and the latter promptly got all of it but the signature. Then began a real battle. 4AG asked for repeat of the signature be-



(VISITORS?)
It's ever thus on Transcon Nites.

had 1JBT's QSL for it. It seems never to have gone past 1JBT, however, and 2RK finally handed it to Portland the following night. Actually moved via: 7DA-6ZO-6ZM - 6ZH-9WU-9ZN-1TS-1AW-2RK-1JBT —, but uncompleted and counted a failure.

No. 2. Eastern Standard Time. 1AW had the following: "Transcon 16 msg nr 2, Hartford, to His Honor the Mayor of Los Angeles, Cal. Mayor Newton C. Brainard of Hartford sends greetings to yourself and city by transcontinental wireless test from Conn. to Calif. Kindly acknowledge.—Hartford Courant." 1AW gave this to 2JU at 1:07, and the latter started promptly to 3DH. 3DH had QRM, but later, picking up the message, gave it to 8ZY at 1:20, whence it went to 9KV at 1:25, and from there apparently to 9LR. Meanwhile 8ZW had copied it from 2JU and gave it to 4AG at 1:17. 4AG tried to give it to 5YH, but at 1:25 the latter told 4AG it was OK at 5ZP, whether copied direct or relayed via 5YH it does not yet appear. Then began a QRM endurance contest between 5ZA,

cause of QRM from 2RK. 5XA obliged, but again 2RK QRM. 2RK was working on the other Transcons all this while, but the synchronism was perfect, and a dozen times in a row he unwittingly busted 4AG on the sig from 5XA. Poor old Pope; we feel sorry for his hard luck. He tried like a good man and it wasn't his fault. In fact, 5XA was repeating each letter in the signature ten times to him after the message was OK in Hartford. 4AG was heard to say in supreme disgust: "By Heck worst QRM I ever hrd in ten years u sa sig M P Snyder? Cum agn name only name only 5XA de 4AG K", and again, "Looks like luck is agnst my ever getting tt clear of QRM pse send name of mayor abt ten times and maybe cn get it btn QRM." But it was no soap, for 8ZL had copied it from 5XA and called 1AW with it at 3:05. 1AW had QRM too, but got most of it; and 8ZW came in and repeated it to him, making complete copy at 1AW at 3:13. Actually moved via: 6EN-5ZA-5YH-5XA-8ZL-8ZW-1AW.

Total elapsed time, 2 hours, 8mins.

No. 3. Pacific Standard Time. At 9:59 6ZE gave 6ZO the following: "Transcon 15 msg nr 3, San Francisco, to Boston Globe, Boston, Mass. Wireless now links Golden Gate and Plymouth Rock; greetings.—San Francisco Chronicle." 6ZA is the man who shoved this one thru, to 5ZA, from whence it moved to 9LR about 10:10, and so to 9ZN about 10:12. From that time on until 10:30 9ZN was trying hard to dump it direct on 1AW or 2RK, but ND thru the QRM. 8ZY got it from 9ZN about 10:15 and got it as far east as 3DH, when 8ZW, who apparently had copied 9ZN, gave it to 1AW at 10:35, filling in the gaps in 1AW's copy of 9ZN's 10:30 transmission. 1AW called 1CK with it at 10:36 but 1CK advised he had copied it from 8ZW at 10:32. Actually moved via: 6ZE-6ZO-6ZA-5ZA-9LR-9ZN-8ZW-1CK.

There was another delay in getting the Boston reply started. 9ZN got impatient and wanted to know "Whats matter up there—too many beans?" But at 11:37 1CK was on the reply to 2RK, who had QRM, but 1AW QSL'd and gave 2RK the missing parts, at 11:48. The message read: "Transcon 15 reply nr 3, Boston, to San Francisco Chronicle, San Francisco. Plymouth Rock returns greetings and congratulations to the Golden Gate.—Boston Globe." 2RK then developed gap trouble and was testing for several minutes, unable to operate, but fortunately 9ZN had got a complete copy from 1AW when the latter was repeating it to 2RK, and put it right thru to 9LR at 11:55. It is not clear just where it next went, but the thread is picked up at 6ZO, whence it went to 6BJ at 12:14, and to 6ZE at 12:18. Actual routing: 1CK-1AW-9ZN-9LR-??-6ZO-6BJ-6ZE.

Total elapsed time, 2 hours, 8 mins.

No. 4. Central Standard Time. This was too easy. 9WU had the following: "Transcon 15 msg nr 4, Ellendale, N. D., to Item, New Orleans. Tardy New Year's wishes from north to south.—Leader." At 11:37 9WU gave this to 5BI, and 5BI tried to give it to 5YH, only to be informed that the latter had already QSR'd it to 5ZP. The reply read: "Transcon 15 reply nr 4, New Orleans, to Leader, Ellendale, N. D. We herewith return New Year's greetings from south to north.—New Orleans Item", and passed up via 5ZP to 5YH to BCO to 9JN, but was intercepted by 9WU when BCO transmitted it, at 12:04, making 27 minutes for the round trip.

Conditions were better this second night, and more of the messages got thru. There were fewer stations making QRM, but the night was marked in the east by the unusual activity of 3PU, who took the first prize of the anti-capacity condenser

as Chief CQ-er. 1AW's log shows him "in" no less than twenty times and really he seemed never to be working anyone but simply calling and having a real good time all by himself, and on a wave the breadth of which Mr. Kolster forgot to take into consideration when designing his w.k. decremeter. The air was so quiet that he must have thought something was wrong with either his receiver or transmitter, and derved if he wasn't going to stick at it until he got things to working right. 2RK and 1AW finally asked 8ZW to "Tie up tt 3PU", and "WX" rolled out some great big QRT's, with the emphasis so much on the T's that they fairly bristled. Finally our friend got the idea, and, content with having been logged only some twenty odd times for QRM, retired and has not been heard since.

THIRD NIGHT—Jan. 16-17.

No. 1. Eastern Standard Time. Another long one: "Transcon 17 msg nr 1, Portland, Me., to Brother Ben L. Norden, Exalted Ruler, B. P. O. Elks, Portland, Ore. We of Portland, Me., lodge rejoice in perfection of a method of communication that so easily speeds this message across the continent and we extend hereby sincerest fraternal regards.—N. D. Colcord, Exalted Ruler." At 1:10 1FV started this from Portland to 1CK, but between direct copying and a few fill-ins from 1AW, 2RK got a copy before 1CK could offer to QSR, and was hard after 9ZN, who QSL'd at 1:24 and gave it to 9LR and 9WU. 9WU passed it to 7ZG, whence it went to 7CC at 1:45, and from there to 7ZI and 7DA in Portland, Ore., at 1:50. Actually moved: 1FV-2RK-9ZN-9WU-7ZG-7CC-7ZI- and 7DA.

The reply read: "Transcon 17 reply nr 1, Portland, Ore., to Exalted Ruler, Elks Lodge, Portland, Me. Message received OK Portland returns fraternal greetings.—Secretary, Portland B.P.O.E." 7DA started this at 1:55 to 7CC, who acknowledged at 1:57 and gave it to 7ZG at 2:01; thence to 9WU at 2:07, 9ZN 2:08, 2RK at 2:14, and thru to 1FV who receipted for it at 2:18:30. This would have broken our transcon record by 11½ minutes, except that somewhere west of 9ZN the signature became garbled and that part of the job had to be done over. 9LR had got it straight around 2:15, and 8ZW tried hard to get it from him but it was impossible thru the QRM. 8ZY worked 9LR and got it, but before he could QSL, 8ZL started east with it, but neither of them got there because 2RK had successfully copied 9LR direct and put thru the correction in the signature to 1FV at 2:31, which time must be counted as the ending time. Reply actually moved via: 7DA-7CC-

7ZG-9WU-9ZN-2RK-1FV, and the corrected reply via ???-9LR-2RK-1FV.

Total elapsed time, 1 hour 21 mins., one minute longer than the record.

No. 2. Eastern Standard Time. A serious effect was made to break the record with this message, and it was held until Nr. 1 westbound was out of the way and the air somewhat quieted. It was short, reading: "Transcon 17 msg nr 2, Hartford, to Los Angeles Times, Los Angeles. How is Calif. weather.—Hartford Courant." 1AW started it at 1:26 but it got a bad start, as 9ZN was QRM-ing the whole east while working west on Nr. 1, and 2RK missed it. 3DH, however, QSL'd for it immediately, but didn't know what to do with it. Eventually he started it to 8ZW, who broke to 4AG immediately, with 2RK (who copied it from 3DH) calling 3BZ and the latter calling 4AG. There was quite a lot of confusion about this time, and steady QRM all over the east from 9ZN who was very loud this night, so that things looked pretty black for Nr. 2. 2RK simply was not to be left out of this relay, and gave the message to 4AG at 1:35. This was the transmission that actually saved the day, as 5YH copied 2RK direct, and succeeded in handing it to 5ZA at 1:55. (Up to this time we in the east were very dubious of the chances of this message, as it seemed all the careful plans had gone askew, but at 1:57 8ZL told 8ZW it was OK at 5ZA and this good bit of news was repeated by 2RK.) Two minutes later 5ZA had it at 6IG, and in two additional minutes it was safe at 6JD, 1:59. The routing via which this message was actually relayed to reach its destination is most unusual: 1AW-3DH-2RK-5YH-5ZA-6IG-6JD.

The reply was brief also: "Transcon 17 reply nr 2, Los Angeles, to Hartford Courant, Hartford. Raining in Los Angeles tonight.—Los Angeles Times." This seems to have left Los Angeles via 6EN, reaching 6IG about 2:10, 5ZA at 2:15, 5YH at 2:18. We don't know whether 5YH gave it to 8ZL or whether he gave it to 5ZP and was copied by 8ZL in so doing, but at any rate 8ZL called 2RK with it and got a GA at 2:22. 9ZN was so loud in the east at this time that they had to ask him to QRX, and after a repeat 2RK got it at 2:24, breaking immediately to 1AW, who QSL'd at 2:27. Actually moved via: 6EN-6IG-5ZA-5YH-8ZL-2RK-1AW

Total elapsed time, 1 hour and 1 minute, a new record!

No. 3. Pacific Standard Time. 6ZE started the following at 10:07: "Transcon 16 msg nr 3, San Francisco, to Boston Globe, Boston, Mass. Golden Gate accepts Plymouth Rock's greetings and returns best wishes for 1921 via the American Radio Relay League.—San Francisco

Chronicle." 6ZE gave this to 6ZO at 10:09, who QSR'd it to 6ZH at 10:16, whence it went to 9LR at 10:23. The record is next picked up at 9KV and we are not sure whether or not 9KV got it direct from 9LR. He gave it to 8ZY at 10:32, who handed it on to 2RK at 10:45 after again having to wait for the eastern stations to find time to take it. "One at a time", as 2RK sed. 2RK called 1CK, and after a repeat, got 1CK's QSL at 10:54:30. Moved via: 6ZE-6ZO-6ZH-9LR-???-9KV-8ZY-2RK-1CK.

No reply to this message was ever started out of Boston, altho the routes were open and everybody along the line was yelling for it. Up to 1:10 Pacific Time 1CK was still reporting "no answer yet to nr 3." As no reply was returned, this attempt must be called a failure.

No. 4. Central Standard Time. 9WU started this to 9JN, finishing at 11:02. 9JN had difficulty in finding anyone to take it and finally dumped it on 9LR at 11:08. From there we have no record of it, nor at this writing have we the text of the message. 5ZP started the reply, however, at 11:21, reading: "Transcon 16 reply nr 4, New Orleans, to Leader, Ellendale. Yours of tonight received 25 very gud work hope this beats that time.—New Orleans Item." 5ZP got no QSL for this, but 5BI again came to the rescue and repeated it, which was copied direct by 9WU at 11:30, making 28 minutes for the round trip. From 5BI the message moved in several jumps to 9JN, who offered it to 9WU at 11:53, only to be told that 9WU had had a copy of it for the past 23 minutes.

These valley relayers proved that the United States simply isn't big enough from north to south to provide them much of a relay, and we'll have to think up something harder for them to do next year.

Special. Eastern Standard Time. Around 2:30, while everybody was waiting for the reply to Nr. 2 to start from Boston, a scheme was hatched to try another special to the coast. The routes being open and the air quiet, the temptation was too great to resist. 1AW asked 9ZN to get all set, and word was passed along the line. At 2:49 1AW transmitted: "Transcon 17 Special, Hartford, to Bessey, 6ZK. Number two breaks record. Answer.—Schnell." 9ZN QSL'd at 2:50, 9LR QSL'd at 2:52, and got it to 6ZH at 2:58. The whole east was quiet for this record, interrupted for a few minutes when 2RK gave the preceding night's Nr. 1 to 1FV, 1JBT having been unable to QSR, or when one of the gang would pipe down some local QRM. There was a golden period in this time, from 2:56 to 3:02, when absolutely dead silence prevailed in Hartford,, everybody in the eastern states straining their ears

for the reply. Meanwhile 6ZH passed the message to 6ZO at 3:03, whence it went to 6ZE at 3:05. No reply came back, and at 3:28 9LR reported the western fellows said Bessey wasn't on, so this attempt for a record also failed.

FINAL NIGHT—Jan. 17-18.

This was the night of nights—a night foredestined to add to the laurels of our organization. The weather was not as good as on any of the three preceding transcon nights, but nevertheless pretty fair. In the eastern half of the country there were light strays, increasing as the night wore on, with "induction" trouble rather general; while west of the Rockies a bad rain storm was raging.

There is really something very theatric in the line-up for a big Transcon test. We have been interested in radio for a good many years, and we have seen a good deal of it from the amateur side, but the wonder of it never palls. There is a genuine fascination for us on any old night when we marvel of our ability to sit in a half-darkened room before a little collection of instruments, with the audions dimly glowing and hear the messages from our friends come buzzing in thru the night. How much greater the thrill, then, on this eventful night as the entire country got set for the endeavor to hang up a new speed record. Mr. Bessey had wired Headquarters during the day, requesting that the special transcon be postponed to 3 o'clock if possible, as that would be a better hour in the west. At 2 a.m. 1AW broadcasted a QST announcing that the test was postponed an hour and that several messages would be tried instead of one. 8ZW, 2RK, 8ZL and 9ZN were asked to take up and repeat this QST, and soon the news had spread to every corner of the country, being taken up and repeated in each section. Everybody was on edge for these tests, and more than one shaky fist testified to a little nervousness. Gradually the air became more quiet, with here and there a brief request to "QRX pse OM transcons", until finally not a signal was to be heard except from the leading stations who were participating in the preliminary arrangements. The great organization of the A.R.R.L. was clearing decks for action. From 3 o'clock until 4:45 not a signal was audible at 1AW when 9ZN was silent except two times when 5ZA was barely readable, yet hundreds upon hundreds of stations were QRX with eager ears, and the very air was tense.

The plan was to see that the route was open to the coast before the test started,

and 9ZN was asked to line up a route and report. 9LR stood by to assist him and 9ZN connected up OK with 5ZA, who in turn was open to 6ZA and 6JD. The line-up, then, was 1AW to 9ZN to 5ZA to 6ZA to 6ZK, and so efficient were these stations known to be and so perfect the co-operation, that it was understood from the first that it would be a high-speed job, with no such thing as waiting for a QRV—the stuff was going thru and it had to be copied. 9ZN and 1AW each had two operators, one to do the tuning only and the other to copy and transmit, and it was a pretty sure thing that nothing was going to get by these stations. With the eastern part of the country silent as the grave, for probably the first time since Marconi invented spaghetti, 9ZN was buzzing along at 30 per getting his lines laid, and finally at 3:01 he turned to 1AW and reported "All set GA."

There were five two-way messages this night, and for the purposes of this story we shall call them A, B, C, D, and E. The times are the elapsed time between the beginning of transmission at 1AW and completion of QSL for the reply by 1AW, and

all figures are in Eastern Standard Time.

(A)—All being in readiness, and getting a firm grip on his key, at exactly 3:06:30 Traffic Manager F. H. Schnell operating 1AW started the first message, which read: "Bessey 6ZK—Answer exact time you receive this—Maxim." 9ZN QSL'd at 3:07:30 and broke immediately to 5ZA, advising 1AW at 3:09:50 that it was OK at 5ZA. 5ZA did not QSR to 6ZA as scheduled, but instead gave it to 6JD. 6ZA copied it, but was unable to hear 6ZK because of the bad weather. 6JD passed it to 6ZK but the latter had already copied it from 5ZA. He replied to 6JD, which 5ZA copied direct. 9ZN QSL'd 5ZA at 3:29 and broke to 1AW with the following: "1AW—Msg recd 12:22 AM—6ZK." 1AW QSL'd this at 3:29:30. Note the speed of actual transmission of this and succeeding messages—many were clipped off at a speed around 30 w.p.m.

The routing for this message was 1AW-9ZN-5ZA-6JD-6ZK, and the reverse for the reply, and the elapsed time was exactly 23 minutes!

(B)—At 3:29:30, instantly following the QSL for (A), 1AW started another, reading "6ZK—Four above zero here how there—Maxim." 9ZN QSL'd at 3:30, and broke to 5ZA without QRV? 5ZA unfortunately was busy with 6JD and missed it, but 9ZN repeated two minutes later and

SORRY, O.M.

that this isn't the kind of story that can have illustrations. But we think you'll find it mighty interesting—it's A. R.R.L. History!

5ZA passed it on to 6JD. 9LR gave it to 6ZA at 3:37, but the storm seems to have pretty well blocked off 6ZA. At 3:52 9ZN reported to 1AW that 6JD couldn't raise Bessey, but word was sent back to persist as it was felt certain 6ZK was on. A combination of stormy weather, low A batteries, bad QRM from arcs, and failure to understand that there was to be more than one attempt, however, had caused 6ZK to go off watch. The outcome would not have been different if he had stayed on, through, as 6JD reported he was unable to hear anyone in Frisco. It being evident that it was impossible to get thru to 6ZK, the Traffic Manager requested that a terminal station be located in Los Angeles if possible, so the work could go on. 1AW did not know at that time that 6JD was handling the messages. Word came back to QRX for a message from Los Angeles, which was being secured, and soon the following came bumping thru: "1AW—Weather very warm and raining all day weather conditions have changed and cant hear anyone north—6JD." This left 6JD at 4:10 and was received by 1AW at 4:13:30. The routing of this, and of all subsequent messages, was 1AW-9ZN-5ZA-6JD-5ZA-9ZN-1AW. Message (B) is considered to have failed, as the reply did not come from the addressee.

(C)—At 4:13:45, immediately upon the QSL for (B), 1AW started another: "6JD—What time did you start msg—Maxim". 9ZN QSL'd at 4:14 and broke to 5ZA with machine-like precision. 6JD was a man after our own heart and wasted no time in formalities: he answered this and following messages right out at his head and wrote it down on paper after it had started east. His reply moved in the same manner as all the others, except that 9LR had copied him direct and was also shooting to 9ZN along with 5ZA, and at 4:20 9ZN broke to 1AW with the following: "1AW—Started ur msg at 1:10 AM—6JD." 1AW's QSL was sent at 4:20:15.

And so was established a new transcon record of SIX AND ONE-HALF MINUTES.

(D)—At 4:20:30 1AW gave 9ZN another one: "6JD—How does Calif regard prohibition—Maxim." This message went thru like the others, except that 5ZA's QSL was relayed to 9ZN by 9LR. It reached 6JD at 4:29 and he started his reply 15 seconds later: "Mr. Maxim—Calif is supposed to be dry but it is very wet here now it has been raining all day—V M Bitz". 6JD thereby proves that he has a sense of humor as well as a sweetly-working station. 1AW QSL'd 9ZN for this at 4:34. Total elapsed time, 13½ minutes.

(E)—At 4:35:15 1AW started the final

one, reading "6JD—This makes radio history what think OM—Maxim". 9ZN was right after 5ZA with it at 4:36, and it reached 6JD at 4:39:45. The boy was right there and broke out a reply which must bring loud huzzahs from the westerners: "Mr Maxim—Yes it will let the east know that there are a few amateurs in the west—6JD." It was a surprisingly short time before 9ZN was shooting this to 1AW, and the latter's QSL was sent at 4:43, making 7¼ minutes for across and back.

The Traffic Manager then sent a QST from 1AW announcing the records and thanking the gang for their co-operation, the air at once burst into activity as hundreds of stations picked up and repeated the news and talked it over, and the Trancons were a thing of the past, but their memory will remain green for many a day, till it is eclipsed when we break these records even as we did the original one.

Naturally we are very jubilant over these results, the more so as they prove our contention that with real co-operation among ourselves our outfit can do anything. The performance of the A.R.R.L. in these tests is a thing of which every one of us can well be proud—it has never before been equalled in history, and it is going to be a mighty hard job to improve upon it. Perfect co-operation made it possible. In Chicago on that last night there was not one single little case of QRM, and only the perfect co-ordination of the Chicago Executive Council could have made that possible. It is a lesson to all of us. There was QRM aplenty on the other test nights, and we could publish a big list of the offenders. However, in most cases it was unintentional, but the too-frequent CQ-ers and the ivory domes thru which the dope could not percolate were shown up pretty well. Co-operation in canning QRM was shown as much as in other operating. Those operators who so willingly stood by and kept their transmitters silent are entitled to feel that they did just as much in making these tests a success as the stations who did the actual relaying—the triumph belongs to the organization.

The average speed of transmission in the messages of the last night was quite high, and often the replies would be coming back before one could believe it possible. If 1AW hadn't written out all his messages before the tests started and had them all ready to transmit, it might have been a different story. As it was it kept a fellow busy logging the times. Listen-

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Communications should be addressed to the secretary at 8 Pitt St., New York, N. Y., or 233 South 3rd St., Brooklyn, N. Y.

Tri-County Radio Club

The amateurs of Richmond, Virginia, met at the John Marshall High School January 17th, 1921, and formed the Tri-County Radio Club. There were forty men present, and Mr. C. D. Blair, A.R.R.L. Supt. Central Virginia was elected Advisory Chairman, Mr. George C. Robinson elected Permanent Secretary, and Mr. Orris M. Selph Acting Chairman. Meetings the first Monday in every month, Room 207 John Marshall High School, Richmond, Va. at 8 P.M. A schedule regulating transmitting and receiving was adopted providing free air 6 A.M. to 5 P.M.; 5 P.M. to 6 P.M. standby for U.S. Bureau Market report; 6 P.M. to 8 P.M. local traffic; 8 P.M. to 9:30 P.M. standby for radiophone music and concerts from local and long distance radiophone sets; 9:30 P.M. to 6 A.M. solely for relay work. This was approved by all the members present and the schedule is in effect immediately. All correspondence is handled by the Secretary, Mr. G. C. Robinson, 657 North 8th, Richmond, Va.

Dallas Radio Club

5AJ has a newly acquired "OW"! District Superintendent Harold P. Heafer and Miss Jessie Wheeler of Dallas were married in that city on Jan 17th, and we are sure the tribe wishes them a happy and prosperous married life. Mr. Heafer, besides being D.S., is chairman of two committees and a member of the Board of Direction of the Dallas Radio Club, likewise a born key-pounder, so no doubt he will have his hands full for a while, with all kinds of "reports" to make.

He has done some excellent work in our club and its organization, being one of the charter members. He has always upheld its integrity and being fair minded, has helped to keep down those little dissensions and squabbles that don't seem so much at the time but if allowed to continue will in time cause a club to disintegrate until its members drop out thru lack of interest, hard feelings, etc., and it becomes a club in name only. Long may he radiate.

Jefferson City Radio Club

At a recent meeting The Jefferson City Radio Club reorganized and drew up a new constitution. The following officers were elected:

President Harold Engelbrecht
Vice President and Treasurer Sam Blair
Secretary Bethel Brace

A committee was appointed to give talks

or a debate once every month and to make the meetings interesting to all who attend.

There are ten members in the Club, all of whom own and operate sets and are doing fine work. Special recognition is given those in the Club who operate licensed stations, thus encouraging the fellows to get licenses. The Club meets every Friday night and affords instruction as well as some wholesome fun. Correspondence from other clubs or individuals is urged. Please address all communications to the Secretary, 403 E. Ashley St., Jefferson City, Mo.

THE STORY OF THE TRANSCONS

(Concluded from page 12.)

ing at 1AW, there would be a few minutes of dead silence after 9ZN had relayed a message west; then, as we camped on his tune, there would come a solitary "r" which would be the unmistakable sign that he had copied the reply from 5ZA and which was confirmed as he instantly called 1AW and repeated it at a speed which made us scramble to get it on paper, and another message had made its round trip. That was the handling that every message got on the eastern end.

Countless new receiving records were set up during these tests, a number of 6's being copied in Ohio and vice-versa. In this issue, for the first time in A.R.R.L. history as far as we recollect, we have lists of "Calls Heard" reporting stations from EVERY DISTRICT! 9CA and 9GC report that on one night there was a time when they could hear 1AW and 6JD transmitting at the same time—both coasts.

We plan to make the Transcons an annual affair—an A.R.R.L. speed classic. The reduction in the record from 1:20 to 0:6:30 is so great that it will take a good line-up and good conditions to improve upon it. Just what can we hope to do? We don't know what the good stations will be a year hence (and it will be interesting to see how they change) but we can reasonably hope that we will have progressed by then to the point where just one intermediate relay, midway across the country, will suffice. Perhaps C.W. will be the solution. Then if we can get an exceedingly brief message, of just two or three words, permitting an answer just as brief, and can handle it at high speed without calling and without QTA's, we seem to have a possible figure of 1½ minutes for the round trip. That would be about the ultimate record, for if the intermediate station were eliminated it would no longer be a relay. However, 1½ minutes is so much less than 6½ minutes that we believe that even that splendid record is likely to fall when the next Transcons roll around.