UNITED STATES DEPARTMENT OF AGRICULTURE — Radio Service — OFFICE OF INFORMATION

PROGRAM..... CHATS BY THE WEATHER MAN. ..... RELEASE Wed. Dec. 29

1924

ANNOUNCEMENT: If you read the weather forecasts in your daily paper regularly, you're familiar with such notices as: PARTLY CLOUDY AND COLDER TODAY, CLOUDIER WITH RAIN TOMORROW --- or, PARTLY CLOUDY WITH RISING BAROMETER TODAY; TOMORROW FAIR. Some folks think weather forecasting is one of the Black Arts, but the Weather Man says there's really nothing so mysterious about it. It's largely a matter of instruments, and in his Chat tonight, the Weather Man is going to tell you about WEATHER INSTRUMENTS and how they're used.

--oOoOoo--

The day's rush was over and I was sitting in the weather office totaling up my Christmas bills.

All at once there came a bold knock at the door.

Really, I was badly in need of something cheerful just then. I called COME IN.

The door swung open and in strode a big, bluff, cheap wearing a tall, grey sombrero. He told me he was just off the Bar Diamond ranch--in town on a holiday spree. Said he was determined to see a real, live weather office before he went back to feeding stock. Said he guessed this weather office was about as good as they come and that he was ready to go up to the tower and look inside that "chicken coop" up there where he figured we kept "the man who makes the weather".

Well, I told him that "chicken coop" up there on the Federal building was a shelter for thermometers and weather instruments, -- not for weather birds. Told him if he wanted to see a live weather bird just to take a good squint at me.

He did -- and seemed disappointed. But he evidently had inherited a lot of determination from his rancher forefathers. He was not to be put off.

Well, we had a meteorograph in the office and I showed him that. I explained how it works. The meteorograph is a triple register and it's all but human. It makes records of the weather that HAS OCCURED -- but not even a meteorograph can predict the sort of weather that IS GOING TO OCCUR.

After I finished the explanation, the visitor said he'd always wanted to know something about THIS INSTRUMENT THAT PREDICTS THE WEATHER. Said he'd heard there's such an instrument, but that he'd

never seen one before. So I had to go through my explanation again -- and tell him again that this meteorograph does not predict the weather for next week, but merely records what has happened. I told him that if he ever expected to see an instrument that would tell one what the weather's going to be sometime in the future, he'd certainly die a very disappointed man.

Well, then he fished a scrap of newspaper out of his pocket, handed it to me, and said: "How do you fellows make up these notices then"?

I read what it said on the paper. It was regular newspaper weather notice. It said, FAIR AND WARMER TODAY.

It looked like he wanted to get the whole story, so I decided to take him up on the tower where I could point some things out, and began:

"Benjamin Franklin discovered that storms move eastward across the country", I stated, as we climbed the stairs.

"I thought he discovered electricity"? said my visitor.

"Well, even if he did -- it's still possible that he also found that storms move eastward across the country", I said. Somehow or other I had a feeling that he was joking with me, so I decided to see the thing through. I went on to explain that vast swirls, or eddies in the atmosphere, hundreds of miles across, move from west to east usually. I told my friend that these areas are called AREAS OF LOW PRESSURE, or cyclones, or just plain STORMS.

"Now", I continued, "there are 200 weather stations, similar to this one, in all parts of the United States. These stations are all connected with telegraph lines. So, when these Areas of Low Pressure, or storms, move along -- generally at a speed of 25 to 40 miles an hour, the stations take measurements of them as they move. The storms are carefully mapped, and the information is sent on to other stations".

"But how do they measure storms?" my inquiring visitor asked.

"With such instruments as these", I told him. We were up in the weather office by now and the instruments were there before us. "Here's the instrument board", said I. "These are barometers. They measure and record the weight of the air. And these thermometers here measure the temperature and moisture content of the air. Here are some wind vanes and an-e-mo-me-ters to measure and indicate the direction of the wind speed. These ne-pho-scopes help us to study the kinds of clouds in the sky, as well as the direction they are moving. We have still other instruments, such as the meteorograph I showed you. We also have instruments to measure rain and snow fall.

"How do they work? he asked.

"Well, what good are these jiggers"? he asked me next.

"They tell us the conditions of the air", I said, "so accurately that we are able -- with all the rest of weather information we have -- to predict the weather for a few hours to 42 hours in advance. These predictions are correct 9 times out of 10".

I noticed that he was impressed.

"How's it done?"

"Every morning, early, the weather man makes his observations", I began. "It takes him from 15 to 20 minutes to read these instruments and the weather observers in all the 200 stations make the observations at precisely the same time each morning. When the observations are completed, the weather observers send them to the central office in Washington, D. C., and to all important cities, BY TELEGRAPH. All this information reaches all the stations at about the same time, and in about one hour after the observations are taken.

"Now, when the weather observers in the various stations get this information, they immediately get busy. They each have a blank map of the United States on which the weather stations are indicated by small circles. As the weather man receives the information, he records the conditions at each station with appropriate signs. Let's take a case. Say this is the Salt Lake City weather station. We get telegraph word that it's raining in Kansas City. In the circle around Kansas City we put the letter R. That means rain. If it's cloudy in Kansas City, we shade the Kansas City circle with a pencil. If it's partly cloudy, we shade half the circle. If it's clear, we leave the circle white. If it's snowing, we write the letter S in the circle. "Do you see?"

He said he did.

"The direction of the wind is indicated by an arrow pointing to the proper direction. Near each station are entered figures, recording the temperature, height of the barometer, the velocity of the wind and the rainfall for the PRECEDING 24 hours, at that place. After all the reports have been translated and entered on the weather map, lines are drawn with RED pencil through places having the same barometric pressure. These lines are called ISOBARS. Other lines, drawn with BLUE pencil, connect places having the same temperature. These are called ISOTHERMS. The complete chart is the weather map. Now do you see what we've done?"

"Yes", he said. "It's just like you could get up in a ballon so high you could see the whole United States, then looked down, and saw the weather for all parts".

"Exactly", I said. "But you'll notice we haven't done a thing but draw a picture of the weather in all parts of the United States THIS MORNING. We haven't forecast it yet, have we?"

"Well, I reckon not", said my visitor. "And that's just what I want to know. What good are these charts now you've made 'em?"

"Why, don't you see?" I asked. "These maps give us a picture of the weather for a given morning. With all the signs before us, we can generally predict the weather for that given day and part of the day following".

"How?" he asked.

"Well, we've already seen that weather usually travels from WEST to EAST. Now, every weather map for the U. S. almost invariably shows regions where the ATMOSPHERE PRESSURE is above or below the normal. The places where the pressure is below 30.00 inches are marked LOWS. Regions where the pressure is ABOVE 30.00 inches are marked HIGHS. LOW PRESSURE AREAS ARE GENERALLY STORM AREAS".

"Now I'm beginning to see it all", he said. "With all those measurements you make, you can tell where the storms are and which way they are moving. If a fellow knows how fast the storm is moving, which way it's moving, he can tell how soon it's going to hit him, eh?"

"Precisely", I said. "But you must remember that we don't fully understand all the signs yet. And then the weather's/highly changeable thing. Sometimesthe signsplays false. That accounts for that one error in ten predictions made by weather men".

"Well it's not so bad at that," said my friend as he turned away from the instrument board and headed toward the stairs. "If I could hit the market right 9 times out of 10 I'd be fixed up mighty fine about now".

And with that wise remark, we went below.

--ooOoo--

ANNOUNCEMENT: That concludes the Weather Man's last Chat during the year 1926. Next week he will continue his short talks on something everybody talks about but nobody does much about.

# National Oceanic and Atmospheric Administration

## ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or Library.Reference@noaa.gov

HOV Services
Imaging Contractor
12200 Kiln Court
Beltsville, MD 20704-1387
July 23, 2010