

# TELEGRAPH TIED UP BY MAGNETIC STORM

Service Over the Land and Cable  
Wires Interrupted All Day in  
America and Europe.

## LIGHTS LIT BY CURRENTS

Operators Try in Vain to Harness the  
Visiting Electricity—Its Rela-  
tion to the Aurora.

All day yesterday the telegraph and cable companies suffered from the interference with their wires by electrical disturbances, which they set down to the existence of special activity of the aurora borealis. The lines were not absolutely prevented from working, but there was a continual series of intermittent interruptions, which made the sending and receipt of messages a slow and tedious performance.

The disturbances were felt all throughout the United States and the Commercial Cables Company declared that its service was affected as far East as the Irish Sea. The disturbance was noticed shortly before 7 o'clock in the morning and continued to spread during the whole day. A wire would work all right for a time and then cease to respond to the current for an indefinite period.

During the height of the electrical disturbance the measuring instruments in the telegraph offices in this city registered the presence on the wires of upward of 500 volts of electric current from the unknown source. This is a greater voltage than is supplied for the operation of any of the land wires, and it lighted several of the incandescent resistance lamps attached to the telegraph wires. Brilliant sparks flashed across the gaps when the telegraph keys were opened.

According to the telegraph companies this phenomenon was a much more severe demonstration than usual of a common trouble. The aurora borealis or the electrical currents which cause the aurora frequently hamper electricians slightly, but it is long since the trouble was so severe or so widespread. The explanation of the interruption given by the companies was that the earth currents which are used by telegraph and cable companies to complete their circuits were overcome by the infinitely stronger currents of the aurora, and consequently the companies' circuits were broken.

At the Weather Bureau it was explained that the companies in ascribing their trouble to the aurora were probably confusing cause and effect. It is not, it was declared, likely that the aurora itself can affect telegraph wires, but that the same electrical energy which causes in high latitudes the displays known as the northern lights makes its power felt on telegraph lines.

This electrical energy runs mainly north and south, and the scientists declare that the "streamers" of the aurora are really all parallel to the magnetic needle.

Several theories have been advanced as to its origin. According to one theory the magnetism of the earth is suddenly increased in a certain district by a current of electrical particles passing from the region of the equator to the polar latitudes. This stream is set in motion by the rapid evaporation in the tropics. As the stream reaches the upper rarefied regions of the northern atmosphere an electrical display is the result of the greater conductivity of the thin air.

Other scientists see the sun's influence at work in the aurora borealis and suspect that the much accused sun spots have something to do with it. But all agree that the northern lights are caused by electrical forces, and it is these which it is believed have affected the telegraph wires and submarine cables.