

CAUSES THAT BRING OUR LOCAL STORMS

Students Make Records Showing Approach of Atmospheric Disturbances.

MORE ABOUT CYCLONES.

Phenomena That Concern Everyone Popularly Explained in Nature Lessons at the University.

The observations for the 10 days ending Friday, June 28, omitting Saturday and Sunday, made by the nature study class of the University of Utah, were reported in class yesterday. All showed that the barometer fell with some regularity from 25.4 inches on June 15 to 25.2 on June 27. On June 28 the barometer read 25.3 and on the 29th, Friday, 25.5. These readings were significant. There was fair and calm weather, culminating in a storm on Wednesday and Thursday, the approaching storm being indicated by the falling barometer. But low barometer indicates a light atmosphere, or air that is rising, while a high barometer indicates heavy or falling air, and consequent dry weather. The facts corresponded with the barometric indications, fair weather both preceding and following the storm of last Thursday. Storms are predicted chiefly by the action of the barometer, for reasons that were then explained.

A SALT LAKE STORM.

It was shown that if a storm originates in Salt Lake valley, there will be first of all a layer of warm air lying just to the north and the lake, and becoming heated and somewhat saturated with moisture. This layer of air will be still until some disturbance—a wind from without, the sound of artillery, thunder, etc.—disturbs the equilibrium, and the warm air begins to rise, making the air lighter over the valley, because of the upward movement, and indicated by a falling barometer. This air will rise till it is cooled to the point of precipitation, and then the rain will fall and the barometer will rise again because the air has become heavier by losing its moisture and by becoming cooled.

TROPICAL CYCLONIC STORMS.

The greater storms that originate within the tropics but not in desert regions are nearly always accompanied by rain. There is good reason for this, because the air in these regions generally springs up in the zone of calms, much as the desert whirls begin; for they seem never to begin in places of well established wind currents, but rather in a place of quiet, weak or variable winds. It is only during the zone of stagnation when the air has no established motion, but stands about idly as if waiting for a command to move, that the lower air may become very moist and very moist, and ready for an overturning. A calm usually precedes one of these storms at sea; the air becomes close and oppressively warm; the water settles down to a glassy surface—these being the conditions that cause the cyclonic storm. Here the area of disturbance is much greater than on the desert.

AMOUNT OF HEAT.

There is a lower temperature of the heated air next to the water surface than a much greater amount of heat in the air because of the vast amounts of latent heat stored in the evaporated water held in suspension in the warm air, every pound of water that evaporates takes in 1,000 degrees of heat without any rise in the temperature of the vapor or of the air that holds it. This vapor then absorbs much of the sun's heat that would pass on the desert to the dry soil, and so the depth of the heated stratum over the water is much greater than over the land. Most of the heat reflected back from the water is likewise caught by the moisture, which is not nearly so transparent as the air, and so the heat is not so penetrable by heat as dry air is. While, therefore, the temperature of the heated air next to the desert (less than five feet high) often rises to 140 or 150 degrees F., close to the ground, that over the tropical seas rarely exceeds 95 degrees. Nevertheless, the sea air contains by far the greater amount of heat, as just explained; for what the sea air lacks in sensible it makes up in latent heat, and what it lacks in actual heat it makes up in amount or depth of the air that is warmed.

WHY MOTION BEGINS.

How the sea-cyclone begins, that is, what begins the upsetting of the air strata, is not exactly known. Probably one place gets a little warmer than surrounding spaces and a gentle current begins, which will be sure to increase in rate if once started. Probably an excess of vapor in one spot will cause a rapid upward diffusion of vapor and thus begin the air current. The vapor of water is 133 times lighter than air at a temperature of 50 degrees, and though the difference would be rather less at higher temperatures, still the weight or pressure of air mixed with vapor is always less than that of air less fully saturated. But when this moist air reaches an altitude where it will condense its moisture into a cloud layer, and thereby warm the surrounding air both by the latent heat which the moisture gives out in condensing and by catching the sun's rays, and it happens that any breeze penetrates this mass of warm, moist rising air, then the cloud will soon condense into rain, a great amount of heat will be liberated and the interior body of warm air will be continuously warmed by the heat given off by the condensing moisture.

WHAT IS LATENT HEAT?

It is not exactly correct to speak of

TREE TEA



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BUSINESS WORRY SLEEPLESS NIGHTS



MR. D. A. GEBHARDT.

MR. DAVID A. GEBHARDT, 573 1/2 Ave., Brooklyn, N. Y., writes:

"Owing to the strain and worry of business, my nerves got in bad shape and I suffered from insomnia. The tortures of sleepless nights became almost unbearable. I tried many so-called nerve tonics without result and I was well-nigh disheartened."

"Hearing so much said in praise of Peruna, I decided to give it a trial, which was a fortunate decision for me. I could feel the benefit from the first dose. Before I had completed my first bottle, I could sleep soundly at night."

"Six bottles made me surprised and gratified at the marked improvement in my condition, and, what is more, I have remained well ever since."

Peruna is not a sedative or a narcotic. How then does it bring sleep to the sleepless?

Simply by putting the digestive organs in good shape. Sleeplessness is either due to weak digestion or deranged circulation.

This "escaping" heat or liberated energy as "latent" heat; for when water evaporates, its molecules are simply spread wide apart by the force of the sun's rays, so that heat energy is there, but it is not in the form of heat, as heat it no longer exists. When the vapor is condensed back again into water, all the energy that had been required to separate its molecules and enliven them to the point of vaporization, must then be given out in some other form; so that condensation is attended with the production of the same amount of heat (energy) as was consumed (made "latent") in the process of evaporation. As the saturated air rises into cooler altitudes, some of its vapor condenses and enough heat is produced to keep the rising air warmer than its surroundings. This condition excites still more the action of incoming wind, and the storm becomes a cyclone. The ascending current moves outward at the height of one or two miles, spreading itself over the surrounding atmosphere.

THE AIR PRESSURE.

Just before the storm begins, the barometric pressure is uniform throughout the storm area, both at sea level and at successive altitudes; and the air will remain at rest as long as the vertical pressure (weight) of the air is at right angles to the surface of the sea. But as soon as the ascending current moves outward, which it does at the height of one or two miles, spreading itself over the surrounding atmosphere, the pressure comes to a uniform. At the center it falls say to 29 inches; over the surrounding district it rises to say 30 inches. Then the air at the center must rise, that the sides must flow into the center, and that from above must sink at the margins of the disturbed area, in the attempt to restore an equilibrium, the whole constituting the vertical circulation of the storm. Heavy rains, accompanied tropical cyclones, which may last, moreover, for many days.

FORWARD PROGRESS OF STORMS.

It is well known that these storms do not stand still, but advance at a velocity of from 5 to 50 miles an hour along a line known as their track. The storm first runs westward near the equator, then turn toward the north, and make an immediate further turn in the form of a parabola and then go northeastward. The trade winds first carry the storm to the west. On approaching the western shores of the ocean, a part of the trade wind movements turn toward the pole and the cyclones take a similar course, thence passing east from Kansas in our country to the Atlantic coast.

BREEDEN GAVE OPINIONS.

Outlining Powers and Duties of County Commissioners.

Atty.-Gen. M. A. Breeden yesterday handed to State Auditor J. A. Edwards an opinion outlining the powers and duties of county commissioners in this state in disposing of lands that have been sold to a county for taxes. The decision says:

In replying to your favor I beg to advise you that the law does not permit the owner of property, which has been sold to the county for delinquent taxes, to redeem the same after the period of redemption has expired, for a less sum than the taxes interest and costs. You are further advised, however, that after such property has been deemed to be county property, the county commissioners may sell the same under the provisions of subd. 35 of section 511, Rev. St. 1895 as amended by chapter 122, session laws of 1903, by advertising and offering the same at public auction at the court house door to the highest bidder, without reference to the amount of taxes, interest and costs.

Replying to your further question, you are advised that when real estate is deemed to the county under delinquent tax sales the county becomes the trustee and agent of the State for the amount of the claim for taxes and interest which the state may have in such property and when the county subsequently sells such property it must account to the state for its proportion of taxes, interest, etc.

PROCLAMATION ISSUED

By Gov. Cutler Calling Attention to Irrigation Congress.

Gov. Cutler has issued a proclamation calling the attention of the people of Utah to the Irrigation Congress to be held at Boise, Ida. Sept. 3 to 8 and urging that the citizens of this state interest themselves in the congress and as many of them as possible attend. The proclamation follows: By official call signed by Gov. George C. Pardee of California, president and the executive officers of the

FOR DESSERT TO-NIGHT

Tip Top Dessert Jelly.

MADE IN A MINUTE. ALL FLAVORS. 10c. A PACKAGE. ASK YOUR GROCER.

national Irrigation congress, there will

be held at Boise, Ida. Sept. 3 to 8 inclusive, 1906, the fourteenth National Irrigation congress.

Realizing the fact that the people of Utah are greatly interested in "conserving the great natural resources of the country, extending its habitable area, insuring greater stability of prosperous conditions, making occupations upon the land attractive, the extension of internal trade and commerce, and a wider knowledge of a great economic movement, which has for its ultimate object the upbuilding of an empire within the borders of a great nation; and realizing, further, that our neighboring state, Idaho, is peculiarly fitted by nature and by development to serve as a splendid object lesson in irrigation and its attendant benefits to the states to be represented at the congress;

Whereas, The people of Utah are especially interested, as neighbors and irrigators, in this representative gathering in Idaho, and in the benefits to be derived therefrom, therefore I, John C. Cutler, governor of the State of Utah, do hereby commend to the friendly consideration of the people of Utah, this approaching session of the congress, and I recommend that as many as possible of our citizens attend the congress, and add to its interest and value by their suggestions; and that all residents of the state give their moral support to this great and important movement.

In testimony whereof I have hereunto set my hand, and caused the great seal of the State of Utah to be hereunto affixed, at Salt Lake City, this 2nd day of July, A. D. 1906.

JOHN C. CUTLER, Governor.

C. S. Tingey, Secretary of State.

SCHOOL CALENDAR

Announced by Board of Education for 1906-7.

The city board of education met last evening in regular monthly session. The calendar for the school year of 1906-1907 was announced as follows:

FIRST SEMESTER.

First Term—Opens Monday, Sept. 17, 1906; closes Friday, Nov. 16, 1906.

Second Term—Opens Monday, Nov. 13, 1906; closes Friday, Feb. 1, 1907.

SECOND SEMESTER.

First Term—Opens Monday, Feb. 4, 1907; closes Friday, April 5, 1907.

Second Term—Opens Monday, April 8, 1907; closes Friday, June 7, 1907.

HOLIDAYS.

Thanksgiving Recess—Thursday and Friday, Nov. 22 and 23, 1906.

Christmas Recess—School closes Friday, Dec. 21, 1906; reopens Monday, Jan. 7, 1907.

Washington's Birthday—Friday, Feb. 22, 1907.

After Days—Monday, May 13, 1907.

Memorial Day—Thursday, May 30, 1907.

As teachers in the high school, the following had been recommended and the appropriate ones made:

Garnet Attridge, Erbe Hague, Jessie Freeland and Margaret McVie.

Eleanor Peterson was granted a leave of absence for the first half of the year, and four were given a like privilege for the entire year, namely, Ethel Lewis, Isabel LeMoine, Lillian Horne and Hilda Youngberg.

Miss Harriet Conn, Stella MacCreedy and Alma Mohr have resigned as teachers, and the resignations were accepted.

Frank Black and Arthur Briers, janitors of the Onegua and Sherwood schools, respectively, were released, and L. J. Wood of the Utah school will look after the old Utah and Burlington furniture, at an advance of \$20 a month in salary.

A. and L. C. Shaw, contractors, will put in the concrete foundation of the Poplar Grove building, as well as finish the structure.

Recommendations of the committee on buildings and grounds were adopted, and the board adjourned until July 16, when enumerators for the school census will be named.

That the bid of Higson & Rosier to install necessary plumbing and heating in Washington school for \$230 be accepted. That the bid of G. W. Anderson to replace and keep blackboards in condition for school year 1906-07 for sum of \$1,000, payable in installments, be accepted on condition that all boards be replaced before opening of schools and that they be resisted during Christmas vacation and at such times as the board may determine.

That the president and clerk be authorized to sign contract.

Mothers, send the children to Calder's. We'll take care of them.

A FAREWELL TO PRESIDENT BUDGE

Fitting Recognition of His Faithful Services to Bear Lake Stake.

PROGRAM AND BANQUET.

Given in His Honor by Bishops and Counselors at Paris, Idaho, on

June 29.

Special Correspondence.

Paris, Idaho, July 3.—As a fitting recognition of the able and faithful services rendered the Bear Lake stake by its late president, who has been called to reside at the Logan temple, a program and banquet was arranged in his honor by the bishops, high counselors and leading officers of the stake on Friday, June 29. The occasion was a memorable one and President Budge himself pronounced the day one of the happiest in his life.

In his home ward, the Second ward meetinghouse of Paris, the participants had gathered from all parts of the stake to show the love and the great respect in which they held their president. The meeting commenced at 10:30 a. m. In the opening address Elder Jos. R. Shepherd, the new president, explained the object of the gathering, eulogizing President Budge and referring to the service of his counselors as well. Presidents Jas. H. Hart and Wm. L. Rich, especially the former, who also retired from the presidency.

For more than a quarter of a century these men have labored for the welfare of the stake through all its growth and development from its earliest trials, hardships and adversities up to the present time, until, so closely interwoven with its history, ever true and faithful, they have become beloved and revered by all the people and respected as fathers in very deed.

As tokens of this love a number of beautiful and costly presents were offered during the meeting on behalf of the bishops, the stake priesthood and the various stake organizations by their respective presidents or representatives. Among these should be mentioned an elegant Turkish rocker, presented to President Budge and a gold headed cane presented to President Hart. The presentations to President Hart were made at his home because his protracted illness and feeble condition would not permit of his attendance at the meeting.

President Budge responded feelingly and gave one of his characteristic addresses, imparting precious words of counsel and fatherly advice, with loving farewell sentiments. While there was present feeling of sadness and a parting tear was seen glistening in the eye, yet all felt proud that their late president was so highly honored in the new trust placed upon him. The assurance that "our loss was some one else's gain" and that he was still in the same great work and in "our temple district" to welcome to the house of the Lord those who go to labor there, was comforting and imparted a peace and joy to the gathering that was heavenly indeed.

At the close of the morning's program the audience repaired to the First ward assembly hall, where beautifully decorated tables spread with a bounteous repast awaited them, and once more they enjoyed being seated with their beloved president at the table, feasting upon the fruits of prosperous Bear Lake.

The afternoon program included reminiscences from the life of President Budge and expressions of appreciation of his excellent administration among the people of God in Zion and in other lands, where he labored as a missionary. These addresses were interspersed with recitations and songs and the meeting was brought to a close by benediction pronounced by President Budge and including a patriarchal blessing upon the people of the Bear Lake stake of Zion.

Mothers, send the children to Calder's. We'll take care of them.

POLICE AND PAWNBROKERS.

Glaring Examples of How They "Stand In" With Each Other.

It becomes necessary for people who lose property which afterwards happens to fall into the hands of pawnbrokers to reprieve the same in order to regain possession of that which belongs to them. Either that, or pay the broker for the money advanced by him upon the articles, plus his interest. The idea seems outrageous, but the rule has been adopted by the police department and has to be adhered to.

Two cases have recently brought the system in vogue into the limelight. One is that of Mrs. Ward of 84 Lincoln avenue and the other that of Mrs. W. B. Throckmorton, of 78 R street. Both ladies were robbed of jewelry by a domestic named Doris Crossley, who worked for each in turn. The property stolen consisted of valuable diamond rings and a gold watch. The rings of Mrs. Ward were a solitaire and another with five diamonds. The two were pawned for \$25, which sum the lady much rather pay herself or go to the expense of a suit. The girl has promised to redeem the property, but there is little likelihood of her doing so. In the meantime, the police have the rings, which they refuse to deliver to the owner until settlement has been made with the pawnbroker.

Mrs. Throckmorton's diamond ring and gold watch were "soaked" for \$12.50 and she is in the same dilemma that Mrs. Ward is, that of having to pay for her own property.

The system adopted by the police of protecting the brokers is defended on the ground that the former have to "keep in" with the latter, in order to get information regarding such transactions. The reason is not a valid one. The broker, in advancing money on an article, takes a chance of securing property that does not belong to the person offering it at his establishment. If the goods have been stolen, he should not be entitled to protection at the expense of the rightful owner. He took his own risk and invariably sells the better part of the bargain so far as the ticket holder is concerned and it is regarded as preposterous to say that the owner should come in and remunerate him for an ill-advised loan.

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Our three leaders can't be bear. Radiant stop with good razor thrown in \$1.00. Mug and good lather brush 50c. Ever Ready safety razor \$1.00; a great assortment of mugs, brushes, honers, soaps, powders and creams, prices suit everybody. Big phones 457. Remember the number.

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IT is well that the Fourth is a holiday. The record-breaking business which this store is having has worn out our employes. Thursday, Friday and Saturday will certainly be tremendous. The reductions average from

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