MARIES OFFICIAL OBSERVATIONS

The Course of the Storms Generally Enstward-What Cold Waves are -Independent Weather Prophets. The schence of meteorology is still in its infancy. About fourteen years ago the first predictions, being then called "prebabilities," were made by the signal service. In order to secure accurate observations taken by over two hundred observers located in different parts of the United States, and all taken at exactly the same instant of time, it was decided by Congress to make these observers smenable to military discipline by enlisting them in the signal corps of the The wisdom of this measure, it is claimed by the officers of the service, is amply proven by the clock-work pre-cialon with which each man performs his duty. Three times daily, at in-tervals of eight hours, is he noting the reading of his instruments: First, the weight of the elastic force of the atmosphere as shown by the barometer; secpad, the relative humidity or per cent of moisture contained in the air, as determined by the hygrometer; third, the relocity, force and direction of the wind, as per anemometer; and lastly, the kind, amount and direction of clouds, and amount of rainfall. For the purpose of brevity this is reduced to cypher form, and within thirty minutes from the time the first instrument is read the full observation is received by tele-graph at the office of the chief signal officer in this city.

These offservation offices are distributed over every section of the country from Florida to Oregon. They record their observations at exactly the same moment (Washington time). Therefore when received at beadquarters and their facts and figures charted upon a map of the United States, the chart becomes a simple photograph of the conditions existing in the atmosphere at that moment. It is from this chart that the predictions for the following day are made. By drawing a line connecting all stations of the same barometric pressure the area of lowest barometer is easily located. Moist air being ligh r than dry, the center of low baremeter occomes the storm center. This center has no wind direction geographically, the atmosphere moving with a rotary motion upward and the surrounding air being drawn toward the center. The winds always blow from a heavy atmospheric pressure toward the nyint of least resistance, moving spirally by ward toward the storm-center.

The low area is usually several hunis stationary its form is nearly circular, but when moving eastward its sides are depressed until it becomes an oval, the depression being proportionate with its velocity. Twenty-four hours is the average time required for a storm to travel from the Mississippi river to New York, and nearly the same time from New York to Newfoundland.

The preparation of these daily weather charts enable the students to go back fourteen years and find a complete record of every storm that has occurred during that time; where formed, the direction and velocity with which it traveled across the country, and all the natural uption to its dissipation. It is the acracy of these records that has enabled United States to take the first place

all hallons in the progress made the science of meteorology; and it is study of them that enables the indion officer of the signal service to dethe formation of a stovm in its inacy and to foretell the path it will and give warning accordingly. course of storms is universally

rd. No storm of the Pacific coast reaches us, as, in crossing successiveseveral ranges of mountains interg, the atmosphere is forced up to n elevation that all moisture is con-I by cold and it descends the eastpe of the Rocky mountains a perdry air; indeed, so void of all huthat hunters cure fresh meat in aiddle of summer by simply hangit on the limbs of trees, and the reion for a hundred miles east of the hills a barren waste.

Many of our severest storms form in the region just west of the Mississippi river, pass eastward off the Atlantic coast, and augmenting in force as they cross the ocean, continue their course over Europe until dissapated by encountering some range of mountains. Be-States is usually visited by rrom one to three heavy storms, which come up from the West Indies, crossing the extreme Southern States in a northeasterly direction, and then following up the coast violent gales always attend. It is claimed that millions of dollars are annually saved to shipping interests of the Atlantic ports by means of the warnings displayed by the signal service several hours in advance of these storms.

A cold wave is an immense river of air flowing from the Arctic regions southward through British America, and entering the United States between the Rocky mountains and the Great Lakes, when it spreads out East and South. It always comes from the same direction, and usually takes about twenty-four hours to travel from St. Paul, Minn., to New York and Washington. As the cold waves come from the Northwest it would be natural to suppose that the warm waves come from the equatorial egions. But such is not the case. They also come from the Northwest. When observations become more general over the entire world, it is presumed that this seeming inconsistency will be explained.

Every few years some person suddenly rains notoriety as a weather prophet by predicting snow or rain several months advance. They usually claim that ing upon the constancy of climate, which has been established by observation, w may predict the general character of mouth in the year with a fair de accuracy. Observations coan extire century at v f a the United States hat the climate of recisely the same fro

one extreme will cer by another; that the fall is the same, the the same, and the mean of the last frost in spring and the first in autumn the same. If several months have been unusually warm, or extremely cold it is not to be supposed that the climate has changed and that the succeeding months will be similar in character; should rather anticipate weather of an opposite description, as we know that all fluctuations of temperature are soon equalized. In the same manner, if the snow and rain-fall for the year have been considerably less than the mean precipitation, it is equally certain that the next year, or the succeeding two years, will be proportionately large. It is probably upon this general law of equalization that our independent weather prophet depends for any foreknowledge he may gain. But it is not specific enough as to boundaries and dates to be of any practical value. - Washington Ster.

#### Animals and Earth Vibrations,

Very probably not only fish but animals and some birds hear as much by the vibration of the earth as by the sound traveling in the atmosphere, and depend as much upon their immediate perception of the slightest tremor of the earth as upon recognition by the car in the maner familiar to ourselves. When rabbits, for instance, are out feeding in the grass, it is often possible to get quite close to them by walking in this way, extremely slow, and carefully placing the foot by slow degrees upon the ground. The earth is then merely pressed, and, and not stepped upon at all, so that there is no jar. By doing this I have often moved up within gunshot of rabbits without the least aid from cover. Once now and then I have walked across a field straight at them. Something, however, depends on the direction of the wind, for then the question of scent comes in. To some degree it is the same with hares. It is certainly the case with birds, as wood pigeons, a flock of them, will remain feeding only just the other side of the hedge, but if you stamp the earth, will rise instantly. will rooks, though they will not fly far if you are not armed. Partridges certainly secure themselves by their attention to the faint tremor of the ground. Pheasants do so too, and make off, running through the underwood long before any one is in sight. The most sensitive are landrails, and it is difficult to get near them, for this reason. Though the mowing grass must conceal an approaching person from them as itscon-ceals them from him, these birds change their positions, no matter how quietly he walks. Let him be as cuuning as he will, and think to cut off corners and cross the landrail's retreat, the bird baffles him nine times in ten. That it is advised of the direction the pursuer takes by the vibration of the surface is at least probable. Other birds sit, and hope to escape by remaining still till they detect the tremor coming direct toward them, when they rise. Rain and dry weather change the susceptibility of the surface to vibrate, and may sometimes in part account for the wildness or apparent tameness of birds and animals. Should any one doubt the existence of such tremors he has only to lie on the ground with his ear near the surface; but, being unused to the experiment, he will at first only notice the heavier sounds, as of a wagon or a cart-horse. In recent experiments with most delicate instruments devised to show the cosmic vibration of the earth, the movements communicated to it by the tides, or by been found almost impossible as yet to carry out the object, so greatly are these movements obscured by the censeless and inexplicable vibrations of the solid earth. There is nothing unreasonable in the supposition that, if an instrument can be constructed to show these, the cars of animals and birds—living organisms, and not iron and steel—should be able to discover the tremors of the surface.-Life of the Fiel

#### Luminous Lizards.

"Some of the geckos have a remarka-ble arrangement for clinging to the wall, and in the East I have observed them at twilight climbing or crawling along the wall over my head just like flies, and upon these insects they mainly feed. One of the most curious has the faculty of becoming luminous at will, and they have been observed crouching on a limb, gleaming just like a coal of fire. A friend of mine, also a collector," continued the speaker, "was on a trip through Asia once, and saw a remarkable collection of these fire bodies.

"They had been tramping through a rough country for several days, and one night came to camp in a thick scrub forest, and, the tents being set, they turned in. My friend's native servant slept in the same tent with him, and in the middle of the night all hands were awakened by a terrific scream from the man, who, when the others awoke, was rushing about the tent yelling at the top of his voice, and literally raining what what appeared to be coals of fire. After a while they got him calmed d.wn, and the luminous objects were found to be merely the innocent lizards. Attracted by something, they had crawled into the tent, and were roaming over the prostrate sleeper, when one happened to cross his face-hence all the trouble.

"No," said the scientist, in answer to a question, "no one has ever solved the As the problem of the curious light that these animals emit. It is a light so luminous, in fact, that you can read by it, yet gives out not the faintest heat; it also gleams brightly when the animal is plunged into the water; in fact, it is one of the puzzles that never has and probably never will be solved .- Cincinnati Enquirer.

#### A Plane in a Tent.

On a certain street in Denver is a stone mansion of surpassing elegance, which, with its grounds, cost nearly \$1,000,000. their predictions are based upon some Directly opposite, on a vacant lot, is a astronomical influence. The claim that tent, boarded up inside as far as the there is any ground for such prediction is disputed by the best authority. Relycont end are a door and window. In the window hangs a curtain of costly lace nd in the tent is a piano of exquisite ne. The tent itself did not cost over The pinno, upta'

#### How the Family Managed.

metropolis are worthy only so far as a mere veneer makes them so, writes a

Well, how many of the people in this

New York correspondent of the Utica Observer. Here is a very interesting true story, and I am sorry to be obliged to omit the names. There lived in a Brook lyn boarding house a gentleman, his wife and pretty daughter. He was a sales-man in a Broadway dry goods house, and his galaxy was \$3,000 a year. He had saved \$10,000 in the course of thirty years of hard work. Last summer the wife and the daughter went to Bridgehampton, Long Island, for a little recreation, and there met a young man from Chicago, who instantly fell completely in love with the young woman. He seemed to have money, and the father was sent for to cone down and look him over. The man of business ascertained in half an hour that the youngster was the son of a rich merchant who was rated among the millions by the commercial agencies. Indeed the Chicago merchant and his wife were at that moment in Bridgehampton. The Brooklyn man formulated a scheme and hurried to Brooklyn to put if into execution. In that city of churches there are to let fully appointed mansions in which are not only furniture, but bedding, table ware, silver service, china, lace curtains, plane and library. The best of them come high, to be sure, but they are exceedingly sumptuous, and to live in them is to enjoy life as though you owned them. Our Broadway salesman at \$3,000 a year hired one of these elegant furnished houses for six months, paid two months' rent in advance, moved in, sent word tohis wife and daughter to invite the Chicago folks home with them. They found their newly made Brooklyn acquaintances living in one of Brooklyn's finest dwellings. The practical eye of the Chicago merchant saw that it must require an income of at least \$15,000 a ear to even live in such a house-more likely it would require double that sum. The Brooklyn man evidently was very rich, and his daughter was doubtless well worthy to be the wife of his son. They had a very pleasant visit. The boy pressed his suit. He was asked to come again in a few weeks and get his answer. He did so, and was accepted. The girl could not then be married too soon, and December was named. Accordingly, just before the holidays there was a grand wedding in the mansion. There was a big handful of Chicago guests who congratulated the young man from Chicago on his good luck in getting so pretty a bride, and one apparently with such well-to-do parents, It was a very successful wedding, and the bride is very happy presumedly in her Chicago home; but the Brooklyn man's lease of the mansion ran out on the 15th of this month, and he is now back in the boarding-house, and still selling goods in the Broadway house at \$3,000 a year. Almost all of the \$10,000 is gone too. But he has married his daughter to the son of a millionaire, and she has promised to take care of him.

#### Animal Suicides.

The London Lancet in a recent article on suicide observed that no animals below-man ever destroy themselves. This is a surprising assertion to come from a scientific journal, for it is singularly at variance with fact. It is too late to make a serious attempt at denying the tendency of many animals to kill themthe "pull" of the sun and moon, it has selves, and while it may be said, and perhaps with some measure of truth, that this tendency is a result of domestication, the admission of that does not change the primary fact. All paturalists have noted animal suicides, and most of them have recorded cases in which the existence of a deliberate purpose was as apparent as in cases of human suicide. The dog, perhaps, is most prone to self-de-struction, and dog suicides have been committed for many reasons, as because of old age and growing infirmities, or because of humiliation on account of purishment, or through jealousy, or grief at the loss of a loved master or mistress. A few months ago several cases of unmistakable suicide occurred among the Esquimaux dogs attached to Commander Schley's Arctic expedition. These animals could not endure the warm weather here, and they deliberately jumped overboard, and held their legs stiff so as to insure their sinking.

Those who at this day deny the occur-

rence of animal suicide no doubt do so in the vain hope of bolstering up the theory of instinct which all modern science negatives. It is terrible to some people to have to admit that animals often exhibit degrees of intellection which it is impossible to distinguish from reason, but facts are much stronger than theories, and the facts in this case make it impossible to maintain seriously such a statement as the Lancet has made itself responsible for .- New York Tribune

#### A Devil Fish One Hundred Feet Long.

We find the following in a letter writ-ten to Professor Baird, United States fish commissioner: Captain Keene states that when fishing on the Grand Bank, in latitude 44 degrees north, longitude 50 degrees west (approximately) he found floating at the surface near his vessel one of the large squid, the body of which measured as accurately as it could be from a dory, was fifty feet long, while the tentacles, all of which were intact and uninjured, were longer than the body, making the entire length more than one hundred feet. The tentacles were larger around than the body of a stout man. He cut the squid up and boated aboard three dory-loads, probestimates that there was at least one to two more boat-loads which he left to drift away. I have frequently heard of dishermen finding pleces of tentacles, etc., which might belong to animals nearly or quite as large as the one above mentioned but I have never before met with any one who has had the fortune to see entire such a king of mollusks. The information which he furnishes seems to be of more than ordinary importance, since it enables us to form more accurate estimates of the maximum growth attalned

Joyfully Astonished.

Mr. James Brunt, Deputy Sheriff, Baltimore, Maryland, writes: In an experience of thirty years I have become acquainted with numerous so-called speci-ties for coughs and colds, but never before experienced such surprising efficacy as was obtained from the Red Star Cough Cure. I was attacked with a se-vere deep-seated cold and cough. I suffered for some time, and tried this valuable remedy. I was completely cured by he use of one bottle.

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"The leprous distilment, whose effect
Holds such an emulty with blood of man,
This wrift as quicksilver, it courses through
The natural gates and alleys of the body,"
and rauses the skin to become "barked about,
most larar-like, with vile and loathsome
crust." Such are the effects of diseased and
mortial bite, the only antidote for which is to
cleame and regulate this liver—an office admirably performed by Dr. Pierce's "Golden
Medical Discovery." Medical Discovery.

CERTAIN trifling flaws ait as disgracefully on a character of elegance as a ragged but-ton on a court dress.

No lady need be without Mrs. Pinkham's No lady need be without Mrs. Pinkann's Vegetable Compound because she is far distant from drug stores. The proprietors send it postage paid by mail from Eynh, Mass., in the form of lozenges or of pills; price, \$1 per box, or six for \$5. Send for the "Guide to Health," which gives full particulars.

THE few handsome women of Turkey are importuned never to marry lest their beauty be marred.

Young men or middle-aged ones, suffering from nervous debility and kindred weak-nesses, should send three letter stamps for il-histrated book suggesting sure means of cure. Address World's Medical Association, Buffalo, N. A.

The United States government has in its employ 400 John Smiths and 800 Joneses and Johnsons.

It's no secret that Dr. Pierce's Compour It's no secret that Dr. Pierce's Compound Extract of Smart-Weed is composed of best genuine French brandy, distilled extract of smart-weed and Jamaica ginger root, with camphor essence, and constitutes, therefore, the best remedy yet known for colin or cramps, cholers morbus diarrhosa, dysentery or bloody-flux, or to break up colds, fevers and inflammatory attacks. 50 cents. By druggists.

It is good discretion not to make much of any man at the first, because one cannot hold out that proportion.

A hundred years might be spent in search of a remedy for Catarrh, Cold in the Head and Hay Fever, without finding the equal of Ely's Cream Balm. It is applied with the finger. Being pleasant and safe, it supersedes the use of all liquids and snuffs. Its effect is magical. It relieves at once and cures many cases which baffle physicians, Price 50 cents at druggists; 50 cents by mail. Ely Bros., Owego, N. Y.

Ely Bros., I have used two bottles of your Cream Balm for Catarrh since December. A sore in my nostril—the cause of much suffering—has entirely healed; have used no other medicine. This spring I feel better, can walk and work with more case than I have in any spring since 1861.—M. E. Ware, Hopeful, Va. I am on my second bottle of Ely's Cream Balm, being a sufferer from catarrh since I was a child, but with this medicine I am being cured.—Wm. L. Dayton, Brooklyn.

"Rough on Pain" Plaster.

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Porous and strengthening, improved, the
best for backache, pains in chest or side, rheumatism, neuralgia. 25c. Druggists or mail. Wouldst see blithe looks, fresh cheeks beguile, Aye, wouldst see December smile? Wouldst see hosts of new roses blow? Carboline makes the hair to grow On the baldest of heads.

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Stinging, irritation, inflammation, all Kidney and Urinary Complaints, cured by "Buchu-

FOR DYSPERSIA, INDIGESTION, depression of spir FOR DYSPEPSIA, INDIGENTION, depression of spirits and general debility in their various forms, also as a preventive against fever and ague and other intermittent fevers, the "Ferro-Phosphorated Elixir of Calisaya," made by Caswell, Hazard & Co., New York, and sold by all Druggists, is the best tonic; and for patients recovering from feveror other sickness it has no equal.

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which is frozen solid to the bottom When you visit or leave New York city, savebaggage, expressing and \$1 carriage hire, and stop at the Grand Union Hotel, opposite Grand Central depot.

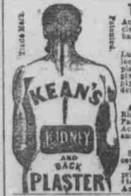
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The combination and preportion of sarsaparilla, dands-on, mandrake, yel aw dock and other remedial agents, a axionizely peculiar to Bood's Sarsaparilla, and out-tnown to other medicines, thus giving to Mood's Saraparilla streiigth and ourstire power surpassing every

sther preparation.

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#### trengthens

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Or any inflammation of the internal organis or more membranes, after exposure to cold, wet, etc., less no time, but apply Raineys Relief 2ver Use paradiated auth congestion or tighant atom on an cute the palient. A tempered is half a tumblet of water will in a few minutes cute Grampa, Spasses, Sour Stomach, Hearthura, Nerrousness, Sleepissaness, Sick Headache, Diarrices, Dyamtery, Colio, Flatulency, and all internal pains.

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