

CAUSES OF DEW.

If dew fell, it would fall for the same reason that rain falls; but dew does not fall—it is simply a deposit of moisture, always contained in the air to a greater or lesser degree, and which, when there is enough of it, will always form on any cold body exposed to the moist air, in precisely the same way that a cold bottle or stone, taken from a cold cellar and suddenly exposed, in the shade, to the moist, warm Summer air, will become wet; this is not sweating, nor does this moisture come out of the bottle or stone, as many people believe, but from the air. It is for the same reason that moisture will condense against the window-panes when the air is cold outside, and moist inside, the moisture slowly freezing, while its deposits form crystals of ice, which we so often admire in winter. When the weather is cool enough, the moisture deposited will even freeze on plants and grass, and then we call it hoar frost; if it does not freeze, it is simply dew. The only point left to be explained is, why does the ground become so cool during the night, so much cooler than the air above it, as to cause the latter to deposit its moisture? This for many years a vexed problem, till Wells first suggested the radiation of obscure heat, which takes place from the surface of the earth through the clear atmosphere into the space above, and so causes the surface to become much cooler than the air itself. He demonstrated this by means of thermometers placed at different heights, and also by the fact that dew is only deposited on cloudless nights. When there are clouds, they reflect the heat, or prevent it from escaping. The surface of the earth thus being kept from cooling, no dew is deposited.—*Manufacturer and Builder.*

THE INDIAN DIFFICULTY.—The Jacksonville *Sentinel* has an account of the difficulties with the Modoc Indians, which contains some particulars not heretofore published. We glean the following: The band of Indians of the Modoc tribe, having their headquarters on Tule Lake, have for two years past refused to go upon the reservation, and have been all this time a terror and a source of constant annoyance to the settlers in that vicinity. During the last summer, quite a large settlement of whites sprang up along the shores of the Lake, and the hostility of the Indians became so apparent that the settlers petitioned Superintendent Odeneal to remove them to the reservation. He referred the matter to the Commissioner, who ordered their removal. The order of the Commissioner was peremptory, and Mr. Odeneal had no alternative but to enforce it; and when the Indian Chiefs refused to hear the Superintendent, he placed the order of the hands of the commanding officer at Fort Klamath, and the attempt to enforce it produced the difficulties which have cost quite a number of lives.

SHOOTING STARS.—M. Silberman advances the following curious hypothesis concerning these cosmical bodies: The celestial spaces are traversed in every direction by an immense number of comets, which are divided by astronomers into two groups, viz., those which move in the same course as the planets direct, and those equally numerous that move in the opposite direction retrograde. Admitting the results of observations of the direction of the shooting stars, and the results of the works of many eminent astronomers, we are led to believe, 1st, that there are streams or currents of shooting stars which produce movement in celestial bodies; the streams correspond to and dependent upon comets of the first or direct order; 2d, streams of shooting stars corresponding to comets of the second order, and having for their function the moderation of this movement and transformation of the force of rotation and propulsion into heat.—*Scribner's for December.*

CASHMERE GOATS.—The hair or fleece from the Cashmere goat, bred on the Pacific slope, has got to be a considerable feature among the commercial products of the country.—Shipments of this article are now regularly made from California to our Eastern ports. In a recent shipment to Messrs. Davis & Paulk, Philadelphia, several hundred pounds of this fleece, after being sorted out, was valued as follows: For fine, \$2 20; low fine, \$1 10; fine kemptly, 80 cts.; low kemptly, 70 cts.; short—from three-quarter grade, 40 cts.; beach grade, 30 cts. The fleeces sold were from three-quarter grade up to full blood.

WATER FREEZING BELOW 32° FAH.—It is generally admitted that water congeals at 0° Centigrade or 32° Fahrenheit, and that it is only in perfectly tranquil places that it can be kept liquid even at a certain number of degrees below the freezing point. *Les Moores* mentions in this connection a curious fact, which it considers due to a supersaturation, so to speak, of the water. If in water, at a temperature of -3° C. (about 27° Fah.), which may even be slightly agitated without congealing, the least particle of hoar frost or ice be introduced, crystals of ice instantly form and expand through the mass, producing remarkable and beautiful effects. The eye can watch the formation of the needles of ice, see them group together and obey those mysterious affinities which produce the exquisite forms with which we are all familiar.

THE PROPOSITION OF SUPERINTENDENT WALKER OF THE CENSUS BUREAU for the taking of an intermediate census in 1875, should meet with general favor. Ten years years constitute a long period now-a-days in the life and progress of this nation. The rest of the world besides Americans desire the knowledge thus afforded as often as at least every three or five years. The Superintendent thinks this an opportune time for urging an immediate census because it can be put before the public in 1876, the hundredth birth-day of the government and thus exhibit a century of national achievement, such as the history of the world does not yet record. Once inaugurated he does not believe that we should again return to the ten year system.

EMIGRATION FROM ENGLAND.—An English paper called the *Laborer's Union Chronicle*, published in the interest of the class from whom it takes its name, states "by authority," that some friends of the agricultural laborers, despairing of a satisfactory settlement of the land question, are making preparations whereby at least half a million of the cream of our agricultural population will be offered an immediate, practical and attractive scheme of emigration to the colonies.

GRAPE VINES ON TREES.—Experience has developed one sound, uniform information, viz., that grape vines are more healthy and productive when allowed to climb upward on trees, or trellises, than if confined to stakes. But at the same time it is a little at the sacrifice of quality. We believe most of the vineyards through the country are failures simply because the vines are pruned too close, and all parts exposed to a scorching sun. If we could train our vines upon arbors, overhead, and allow them to make and enjoy a cooling shade of their own, we doubt not, vine culture will be more steadily encouraged.—*Horticulturist.*

The vote in the Electoral College of Tennessee was cast for Thos. A. Hendricks of Indiana for President, and B. Gratz Brown for Vice-President. The vote in the Georgia College stood: For President, B. Gratz Brown, 6; Horace Greeley, 3; Charles Jenkins of Georgia, 5. Vice-President, Brown 5; A. M. Colquitt of Georgia, 6; N. P. Banks, 1. Fred. Douglas was chosen messenger to carry the vote of New York to Washington. The Colleges of Indiana and Maryland passed resolutions of respect for Greeley and regret for his loss.

ENAMELED COOKING UTENSILS DANGEROUS TO HEALTH.—Dr. Zinrek has examined the enamel on hollow-ware sold in Berlin, and reports that the enamel on a stew pan made in Belgium contains so much lead that 15 centigrams of oxide of lead (2 1/2 grms.) was found dissolved in one liter of vinegar (3 per cent. acetic acid) which had been boiled in it for one hour.—*Amer. Chemist.*

KINGSLEY SAYS: "If you wish to be miserable, you must think about yourself; about what you want, what you like, what respect people ought to pay you, what people think of you, and then to you nothing will be pure. You will spoil everything you touch; you will make sin and misery for yourself out of everything God sends you; you will be as wretched as you choose."

TO CLEAN FURNITURE.—An old cabinet-maker says: "The best preparation for cleaning picture-frames and restoring furniture, especially that which is somewhat marred or scratched, is a mixture of three parts linseed oil and one part spirits of turpentine. It not only covers the disfigured surface, but restores wood to its original color, and leaves a lustre upon the surface. Put on with a woolen cloth, and when dry rub with woolen."

TO BLEACH FLANNEL.—Soak for an hour in a weak solution of bisulphate of soda, then add a little muriatic acid, stir well and cover the vessel for twenty minutes. After this, take the flannel out, rinse in plenty of soft water and dry in the sun.

SALT—ITS EFFECT ON THE BLOOD.—Dr. Stephens, a French physician, saw a butcher killing a pig. He observed that he stirred the blood of the animal, and added a handful of common salt to it while stirring, which immediately made it crimson, and the stirring being discontinued, remained fluid. The change of color awakened his curiosity. The butcher could give no explanation of the phenomenon, except that it kept it from jelling and spoiling. Dr. Stephens seized a vessel, caught some blood, and made several experiments by putting salt into it, and found the blackest blood was instantly changed to bright vermilion by salt. "And," said he, "here is a fact that may lead to a practical rule." He observed, in cases of yellow fever in the army, that the blood drawn was very black and fluid and on adding salt it became vermilion and retained its freshness; whereas, putridity of the blood is one of the characteristics of yellow fever. He therefore abandoned the usual mode of treating it and gave his patients a mixture of various salts, and in a very short time reduced the mortality of fever in the West Indies from one in five to one in fifty.

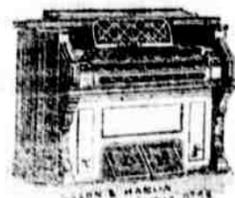
A METEOR IN ARKANSAS.—About twelve miles south of Huntsville, Madison county, on the 8th instant, occurred the most wonderful and startling phenomenon that has ever been witnessed by the citizens of that neighborhood. Near the farm of Captain Smith, sheriff of the county, some of the citizens were startled by a frightful noise like the rushing of a mighty cannon ball through the air. On looking up, they discovered something that looked like a column of fire passing with tremendous velocity through the air, with a whirring, hissing sound, something like that of a shell, but many fold louder. It appeared to be from eight to ten feet in length and from four to five feet in diameter, but it was passing with such swiftness that it may have been many times larger than it appeared. When first discovered, it seemed to be several hundred feet above the earth, and was inclining in its course toward the ground, profusely emitting great sparks of fire. About a minute or two after it passed out of sight, an awful explosion was heard, that shook the earth for miles around, and was heard at a distance of fifteen miles. The truth of this statement is vouched for by several prominent citizens of the neighborhood.—*Fayetteville (Ark.) News.*

EFFECTS OF MESMERISM.—A gentleman residing in an interior town in Pennsylvania states that recently while a mesmeriser was performing in his place his neighbor's little daughter, a pretty, bright child, became a very interesting subject; and during the stay of the professor was nightly under her influence, sometimes for two hours. Her mind seemed in a strange way the day after he left, and in two days she was taken with a severe headache with darting pains; these terminated in a stupor, and, for about six months, she has been under medical treatment. The physicians say she has no disease. The poor child is in an object of pity, having pined away to a skeleton and become perfectly helpless and idiotic. She does not know her own wants; never asks for food, merely opens her mouth when it is touched, and takes it like a young bird.

WOMAN'S RIGHTS AMONG THE BIRDS.—On the whole, there seems to be a system of Woman's Rights prevailing among the birds, which, contemplated from the standpoint of the male, is quite admirable. In almost all cases of joint interest, the female bird is the most active. She determines the site of the nest, and is usually the most absorbed in its construction. Generally, she is more vigilant in caring for the young, and manifests the most concern when danger threatens. Hour after hour I have seen the mother of a brood of blue grosbeaks pass from the nearest meadow to the tree that held her nest, with a cricket or grasshopper in her bill, while her better-dressed half was singing serenely on some distant tree, or pursuing his pleasure amid the branches.—*Atlantic Monthly.*

The following is the text of Mr Sumner's resolution to obliterate the record of the war from the Army Register, of which mention was made in the dispatches of the 2d inst.: WHEREAS, National unity and good will among fellow citizens can be assured only through oblivion of past differences, and it is contrary to the wishes of civilized nations to perpetuate the memory of civil war; therefore, be it enacted, The names of battles with fellow-citizens shall not be continued on the Army Register or on the regimental colors of the United States.

JOHN HUGHES,
Corner of STATE and LIBERTY Streets
— DEALER IN —
GROCERIES,
Bacon, Lard, Butter, Cheese, Flour, Grain, Feed,
AND DOMESTIC PRODUCE OF ALL KINDS.
Paints, Oils and Window Glass, American and English
Coach Varnishes, English and American Furniture Varnishes,
Gum Shellac, and Japan Varnishes, White
Damar and Asphaltum Varnishes.
CASTOR OIL, LARD OIL, NEATS FOOT OIL, CHINA NUT OIL,
ELEPHANT OIL, DOGFISH OIL, POLAR OIL, COAL OIL,
LINSEED OIL, PUTTY COLORS, LAMPBLACK, RAW AND BOILED OIL,
GRAINING TOOLS, &c., &c.
Wholesale and Retail at **JOHN HUGHES.**
Cash paid for all kinds of Merchantable Produce at Cash Rates.
111 1/2 **JOHN HUGHES.**

GILL, STEEL & CO.,
DEALERS IN

BOOKS, STATIONERY
Musical Instruments,
SCHOOL BOOKS.
A GENERAL ASSORTMENT OF THE BEST
Standard Publications.
TEACHERS' REQUISITES,
Such as Globes, Maps, Charts, Crayons, Call Bells,
Rewards, &c.
MISCELLANEOUS BOOKS.
A general assortment, and everything published
in the United States or Europe imported to order
on short notice.
We invite especial attention to our stock of

Mason & Hamlin Organs,
THE BEST IN THE WORLD!
CHICKERING,
MARSHALL & MITTAUER,
And EMERSON
PIANOS!
FLUTES, VIOLINS, ACCORDEONS, &c., &c.
A complete assortment of MUSIC INSTRUC-
TION BOOKS. AD15.
GEO. H. JONES. J. M. PATTERSON.
Jones & Patterson,
Real Estate, Insurance,
...AND...
GENERAL AGENTS,
COMMERCIAL HOTEL BUILDING,
Salem, Oregon.

SALEM
FLOURING MILLS.
Best Family Flour,
Baker's Extra, XXX,
Superfine, and Graham,
Middlings, Bran, Shorts,
CONSTANTLY ON HAND.
Highest Price in Cash
PAID FOR
WHEAT, AT ALL TIMES.
R. C. KINNEY,
Agent S. F. M. Co.
Salem, Sept. 14th

H. D. BOON,
DEALER IN...
BOOKS, STATIONERY
MUSIC,
Periodicals, Newspapers,
Wall Paper,
...AND...
Musical Instruments
THE CELEBRATED
BURDETT ORGANS
...AND...
Hallett and Cumston's Pianos
Always on hand.
These instruments are FAVORITES with all
musicians, and this Store is the resort of all who
wish to buy Goods cheap.
H. D. BOON,
Dec 2. Commercial street, Salem.

L. S. SCOTT,
State street, next door to G. W. Gray,
...DEALER IN...
Groceries and Provisions,
Tobacco and Cigars,
Foreign and Domestic Fruits,
FARMERS' PRODUCE,
CROCKERY,
Glassware & Stoneware
Salem, July 30, 1870.

Willamette Nursery,
G. W. WALLING & CO.,
OSWEGO, OREGON.
GROWERS OF THE CHOICEST VARIETIES
of
Fruit Trees & Shrubbery
Particular attention given to CHERRY AND
PLUM TREES.
Persons intending to purchase Trees during the
season of 1871-2, should call and examine our stock
which is the
Largest and Best in the State
Send for Catalogues, distributed gratis.
Nov 11-1f.
James F. Brown,
Agent for Willamette Farmer
IN EUGENE CITY.
BOOKSELLER AND DEALER IN MAGA-
zines, Periodicals, Newspapers, Books and
Novels.
Subscriptions taken for the WILLAMETTE
FARMER, and all Eastern Publications, at Pub-
lisher's prices.
Willamette street, second door to the St. Charles
Hotel, Eugene City, Oregon. Ap19.

S. EUGENE,
REAL ESTATE AGENT AND NOTARY PUB-
lic. Deeds, Mortgages, and Powers of Attor-
ney drawn. Acknowledgments taken.
Forest Grove, Oregon, Aug. 5, 1871.-1f.
Kansas Central Land Agency.
Maj. JOHN W. BAKER, Prop'r.
Real Estate Business; Agent for the Kansas
Pacific Land Co.'s lands, and publisher of the Ken-
sas Central Agency, a LAND BUREAU of 20,000,000
acres; only 75 cents per annum.
S. W. HAYES. J. J. HAYES.
HAYES & HAYES,
ATTORNEYS AT LAW, SALEM, OREGON,
Office over Gray's store, corner of State and
Liberty streets. May 17-1f.