THE LEBANON EXPRESS.

VOL. I. LEBANON, OREGON, FRIDAY, JUNE 17, 1887. NO. 16.

The Lebanon Express.

(ISSUED EVERY FRIDAY.)

J. H. STINE & CO. ..... Publishers

TERMS OF SUBSCRIPTION.

One Year $2 00
Six Months 1 25
Three Months 65
(Payable in advance.)

TERMS OF ADVERTISING.

(LEGAL.)

One square, first insertion $2 00
Each additional insertion 1 50

(LOCAL.)

Local Notices, per line ..... 15 cents

Regular advertisements inserted upon liberal terms.

JOB PRINTING.

All descriptions of Job Printing done on short notice. Legal Blanks, Circulars, Business Cards, Bill Heads, Letter Heads, Posters, etc., executed in good style and at lowest living prices.

SOCIETY NOTICES.

LEBANON LODGE, NO. 41, A. F. & A. M.: Meets at their new hall in Masonic Block, on Saturday evening, on or before the full moon.
J. WASSON, W. M.

LEBANON LODGE, NO. 47, I. O. O. F.: Meets Saturday evening of each week, at Odd Fellow's Hall, Main street; visiting brethren cordially invited to attend.
J. J. CHARLTON, N. G.

HONOR LODGE NO. 37, A. O. U. W., Lebanon, Oregon: Meets every first and third Thursday evenings in the month.
F. H. ROSCOE, M. W.

SONG OF THE GROCER.

"O teas me not," the maiden cried,
"Such things I do despise,
I wish you really would go weigh,
And from your knees would rise."

"I can not help this coffee said,
For you have chilled me through;
Though you to me have given the sack,
No fairer flour e'er grew.

"This soap has slipped away from me,
That I can call you mine;
But if the barrel be removed
Please drop to me a line.

"I'd scale the highest grade for you,
Or grind my way so fine;
Whatever else get's mixed, you'll see
My heart will round you twine.

"I shall not strive you to appease,
Though this is butter blow,
I still must think what might have been
Had you not said me no."

—*San Francisco Wasp.*

COLLIERY EXPLOSIONS.

Efforts Which Have Been Made to Prevent Them.

The "Davy" Lamp and Fire Damp—Coal Dust Dangers—"Shot-Firing" to Give Place to Safer Methods of Explosions.

The atmosphere of every coal-mine probably contains more or less marsh gas, although in some the amount is so very small that the air within them could never become explosive under ordinary conditions of working. There is no doubt that gas frequently escapes detection owing to the imperfection of the means employed for its recognition. If present in certain proportions the marsh gas is revealed by the elongation of the flame of the safety-lamp, or by the appearance of what is known as a "cap" upon the flame. An experienced eye can determine pretty accurately the relative amount of the fire-damp from the size and character of the cap upon a properly trimmed flame; but the test altogether fails when the proportion of gas falls below two per cent. This amount, small as it may seem, may, under certain circumstances, prove highly dangerous. The mine-manager and the "firemen" require to use some more delicate method of detecting small quantities of fire-damp than that usually employed. Fortunately such methods are not unknown. Mr. Liveing has devised a very ingenious indicator, by which the existence of marsh gas can be detected and its amount estimated even when the quantity is as low as a quarter per cent. Two precisely similar pieces of thin platinum wire are simultaneously heated to bright redness by the action of a small magneto-electric machine worked by hand. One of the wires is contained in a small tube filled with pure air; the other can be surrounded at will, and in a minute or two, with air from any part of the mine. If fire-damp is present it burns round the hot wire, which is thereby increased in temperature and emits a more brilliant light. By comparing the intensities of the light emitted by the two wires by the aid of a very simple photometric arrangement the percentage amount of fire-damp present may be at once determined. The apparatus is portable and easily worked, and is well adapted for use under ground.

Seventy years have elapsed since Sir Humphrey Davy invented the safety-lamp which is associated with his name. It is almost impossible to overestimate the influence of that invention in the development of coal-mining—in the development, indeed, of our national prosperity. It has unquestionably saved thousands of lives, and has enabled millions of tons of coal to be raised which, without it, could not possibly have been won.

It is related that when Mr. Buddle, whose name is well known in the history of coal-mining for the improvements he introduced into the system of ventilating collieries, took down one of the first Davy lamps into a fiery pit and beheld the fire-damp "cap" playing round the light and apparently imprisoned within the wire-gauze cylinder, he exclaimed exultingly: "At last we have subdued this monster!"

Not a year passes, however, without the 'monster' showing us that he is still very far from subjection; and, strange to say, the Davy lamp itself and the very system of ventilation which we owe to Mr. Buddle, as developed in these later times, have conspired to aid the 'monster' in his work of havoc and disaster.

How this has come about may be told in a very few words. When the lamp was first introduced the ventilating currents in mines seldom exceeded a velocity of three hundred feet per minute in the air-ways, and they were usually very feeble in the working places. Nowadays the enormous fans and other mechanical ventilators which are employed cause the air to travel at velocities approaching two thousand feet per minute in the air-ways, and currents of more than four hundred feet per minute are not unfrequently met with at the working places. Under these conditions the Davy lamp and, in a lesser degree, two other well-known forms of safety lamp,—the Clanny and the Stephenson lamps—become absolutely unsafe in an explosive atmosphere. Indeed, the ordinary Davy lamp will ignite gas outside it if exposed to an explosive current traveling at less than four hundred feet per minute

The Royal Commissioners, as far back as 1880, directed the attention of the Home Secretary to the fact "that the employment of the ordinary Davy lamp without a shield of metal or of glass, in an explosive mixture, when the air currents exceed six feet per second, is attended with risk of accident almost amounting to certainty." Indeed, merely attempting to blow out the flame within the lamp may cause it to ignite an inflammable mixture. Happily invention has not been long behind necessity, and there are at least half-a-dozen forms of lamp which are safe under current velocities exceeding three thousand feet per minute. Everybody will agree with the conclusion of the Royal Commissioners that whilst it would be unwise to make a particular lamp compulsory on the ground that difficulties might thereby be thrown in the way of introducing improvements in future, it is nevertheless desirable that some control should be exercised in reference to the kind of lamps to be employed in coal-mines, and that only those lamps should be used which are authorized from time to time by the Secretary of State.

Fire-damp, however, is not the most formidable of the causes of colliery explosions. It is doubtful, indeed, whether a single one of the more disastrous explosions of modern times can be directly and wholly attributed to its action. It is significant that violent explosions seldom occur nowadays in very wet pits, although the air in them frequently contains fire-damp. Moreover, when explosions do occur in such pits they rarely extend over a large area, and the loss of life from them is comparatively small. Such catastrophes as those of Abercarne, Risca, Seaham and Penygraig, where hundreds of men and boys are killed, and where evidence of the explosion is to be met with in nearly all parts of the pits, almost invariably happen in dry and dusty pits. It hardly admits of question that explosions of this kind are dependent upon the presence of this dust. Dust explosions in flour-mills have long been known, but it is only within the last few years that the action of finely divided coal-dust in initiating or propagating a colliery explosion has received much attention. The atmosphere of a deep dry mine is always impregnated with more or less dust. It settles everywhere, not only in the working places, but in the intake and haulage roads. It is not only on the floor, but hangs from the roof and timbers, and is heaped up on the ledges. A violent movement of the air dislodges it in clouds; if a naked flame be introduced into such a cloud it inflames with explosive violence and the concussion of air is followed by fresh clouds of dust through which the flame is propagated.

"——the smutty grain
With sudden blaze diffus'd inflames the air."

Milton said this of gunpowder; it is even truer of coal-dust.

Now there are many conditions in the ordinary working of a coal mine which may occasion these violent movements of the air, and chief among them is the prevalence of what is technically known as "shot-firing"—that is, blasting by means of gunpowder. Gunpowder is used in the mine either for bringing down the coal or for removing stone, in order, for example, to make roads for the passage of horses, and for engine planes, etc. A hole is driven or drilled into the coal or stone, into which a certain quantity of powder, together with a fuse, is introduced, and the rest of the hole is "stemmed" or "tamped"—that is, filled up with small stones and earth or, too frequently, with small coal itself. The fuse is ignited and the workmen retire either into a "refuge hole" or round a corner until the blast is made. Occasionally it happens when the charge of gunpowder is too large, or when it is imperfectly stemmed, or when the rock is unusually hard, that the powder blows out the stemming and there is a violent concussion of air, and from the mouth of the drill-hole there issues a flame the length of which will be greatly increased if small coal has been used in the stemming. Indeed, it is not necessary for the shot to be "blown out" to produce either the flame or a concussion of air sufficient to dislodge the inflammable dust. We have here a condition of things which may be highly dangerous in dusty pits. It has been proved over and over again that shot-firing has been the immediate precurser of some of the most disastrous colliery explosions on record. The influence of dust in at least propagating an explosion is now generally recognized by mining engineers and colliery managers, but it is still a moot point with some whether it is capable of initiating an explosion or, indeed, of propagating it in the absence of fire-damp. There is, however, a considerable body of evidence to show that whilst the explosive character of a dusty atmosphere may be greatly augmented by the presence of fire-damp, dust alone may be sufficient to bring about the most disastrous explosions. It is known that explosions have occurred simultaneously with the firing of shots in stone, and certain of these shots have been fired in a dusty main intake-road, and at points where currents of air of over 20,000 cubic feet per minute were passing. It is almost inconceivable, except on the theory of the sudden outburst of gas at places where it is in the highest degree improbable that such outbursts could occur, that such air could contain any sensible quantity of fire-damp. The concussion of air would certainly dislodge large clouds of dust from the roof and from the floor, and this once ignited, would cause an explosive wave which would travel throughout the pit or so long as the ignition was maintained by fresh clouds of dust.

Of late years the use of explosives in coal mines has been considerably restricted, and some people have gone so far as to demand their absolute prohibition. Explosive agents are, however, much too powerful auxiliaries in colliery working to be readily given up, and indeed if they are used intelligently there seems no reason why they should be discarded. In the case of gunpowder much may be done to minimize the evil by watering the roadways and roofs, and by preventing as far as possible the accumulation of dust. In the haulage-ways and engine-planes the dust is largely due to the action of the air-currents impinging against the broken coal in the tubs, which frequently run from ten to fifteen miles an hour along the roads. A variety of methods have been suggested for keeping down the dust, but nothing seems to have been attempted on a sufficiently large scale. This much seems certain; if the continuance of shot-firing by means of gunpowder is to be permitted, this question of dust will have to be more seriously grappled with than it has been hitherto. The Royal Commissioners have reported that they are convinced, from extensive practical experiments carried out by themselves and others, that the abolition of the use of powder in dry and dusty mines will not generally involve any formidable inconvenience. There are other methods of getting coal than by the use of gunpowder, and some of these are quite as efficient as, and scarcely more expensive than powder. Blasting by means of lime has of late years been extensively practiced. In this process the expansive effect which follows the slaking of quicklime, finely powdered and pressed, by hydraulic power into small cylindrical blocks, is made use of. It is the opinion of the Commissioners that in some coal seams the lime cartridges will perform work quite equal to that accomplished by powder, at no greater cost and with absolute immunity from risk of explosions. Dynamite, tonite, and explosives of this class can also safely be used in conjunction with water for blasting in stone, or shale, or coal, even in dusty air containing fire-damp. There are also various mechanical appliances which will do efficient work both in coal and stone, and in which blasting is altogether obviated.

The limits of this paper will not allow us to go into these matters at greater length. It will be sufficiently evident, however, that we are rapidly dispelling much of the obscurity which has hitherto surrounded the origin of many colliery explosions. There is good reason to hope, therefore, that the time is not far distant when in the light of this fuller knowledge and with the more intelligent supervision which should follow from it, the frequency of these disasters will be very greatly diminished.—*Walter C. Smith, D. D., in Good Words.*

NOBLE ANIMALS.

The Undaunted Pluck and Docility of Arab and Persian Horses.

The general run of Arabs are, no doubt, first-rate horses, so far as they go, for military purposes, but they are too small to mount satisfactorily any but native cavalry. There are, of course, exceptional animals which have size and power enough for any thing, but they are so few that that they may be left out of the general estimate which we take of the race. For any soldier whose weight is such that he can be mounted on an Arab he will be found the hardiest, soundest and most docile of war horses. He will do an enormous amount of work on very little and very indifferent food, and will always bear himself well and handsomely. In one point only is he, more than other horses, susceptible of disease, and that is his eye, which is liable to cataract. His great characteristic is his undaunted pluck, which is never more clearly shown than when by any chance he is ill, when all veterinary surgeons will allow that he is a most admirable patient, resisting and throwing off the effects of illness or treatment in a way that no horse of another race can equal. Persian horses have always been found among the most generally useful remounts in India, and they take their place both in the ranks of cavalry and in gun teams. They have more power and size than Arabs, with much of the same constitutional good qualities, and—a matter of great importance to the State—they are generally cheaper in price.—*Blackwood's Magazine.*

BOGUS MAPLE SIRUP.

The Best Way for Farmers to Fight Dealers in Adulterated Goods.

Prof. A. J. Cook points out the fact that while comparatively little genuine maple sirup is made, it is well-nigh impossible to go into any of the thousands of grocery stores in this country without finding plenty of jars marked "Pure Maple Sirup." It is a story of fraud and adulteration as wicked as that practiced by the oleomargarine people. Glucose sells for less than 20 cents per gallon. Mixed and doctored with a little maple flavoring, it is sold for $1.00. This glucose is made from corn. The grain is ground, the starch washed out and heated with sulphuric acid. The acid is afterward removed by the use of lime, but the consumer never knows how complete this removal is or whether any of the acid remains in the glucose he is called upon to eat. When poorly prepared—and the consumer never knows when this condition occurs—glucose contains a virulent poison which will surely injure the system. Makers of pure maple sugar must convince their patrons of their honesty. The sweet they prepare in its pure state will always command the highest price, for it is a delicate luxury. The best way to fight the bogus dealers is to warrant every can as strictly pure, to observe the most scrupulous honesty and to advertise in an attractive way.—*Rural New Yorker.*

—The New York *Sun* enthusiastically indorses Hannibal Hamlin's suggestion that Lincoln's birthday should be a national holiday like that of Washington.

THE FLY-TRAP OF VENUS.

A Pretty Plant Which Attracts and Captivates Every Thing That Approaches It.

One of the best known of these insect-eating plants found here, as well as in Lapland and Scandinavia, is the Sun-dew (*Drosera*), discovered about a century ago. Another plant, the so-called Flytrap of Venus (*Dionæa*) of America, which was brought to England one hundred and twenty years ago, has received the name of Venus for the reason that, like the Goddess of Beauty, it attracts and captivates every thing that heedlessly approaches it. At the bottom of the plant the leaves cluster like a rosette; from the center of this arises the flower-stalk. The edge of the leaf, which is nearly circular, is over-grown with strong bristles, while its surface is covered with small glands, at either side of which are three long hairs. A fly approaches; carelessly it settles on the leaf and perchance it touches one of the six long hairs: suddenly the leaf folds, the bristles interlace, and the insect is caught. Oftentimes the whole tragedy takes but ten seconds. The sensitive hairs have performed their duty; now begins the work of the glands. These discharge a large quantity of a colorless acid slime—the digestive fluid, pepsin—and the closed leaf changes at once into a stomachic organ. After a lapse of eight or nine days the leaf reopens, the insect has disappeared, the prey has been consumed. The above-mentioned facts constitute the main features of the process of digestion, but in connection with it many questions arise. What happens, for instance, if a non-edible object irritate the hairs, perhaps a stone or a piece of wood? The leaf closes with the greatest possible swiftness, but soon discovers its mistake, and does not discharge the digestive juice; after a lapse of twenty-four hours it again unfolds, ready for another capture. This does away with the marks of distinction thus far generally accepted, namely, that "plants live, animals live and feel" (*plantæ vivunt, animalia vivunt et sentiunt*). for the Dionæa distinguishes quite readily, by taste and feeling, that which is digestible from that which is not. By experiment, it has been ascertained that nitrogenous nourishment is preferred by the Dionæa; hence every kind of meat (beef, pork and veal, either raw, fried or stewed) is digested by the plant; also albumen and cheese; the latter, however, causes disturbances during digestion, and the leaf easily ails.—*Dr. Pfuhl, in Popular Science Monthly.*

NOT A NEW FOLLY.

Story of Some Fasters Whose Feats Once Astonished the World.

The fasting feats of Succi and Merlatti had their rivals in the fifteenth century. An ancient book, by one Panormita, quotes a faster named Picentini, or Picenta, who died blaspheming Christ and the Virgin. This Antonio fasted for forty days, and filled Italy, Sicily and Spain with the fame of his sanctity and abstinence. He was shut up in a cell and guarded. It was thought that angels brought him food and conversed with him every day. The truth is that he had in his cell some large candles. These consisted of an outer coating of wax only, which covered hollow reeds containing farina, bonillie and a mixed hash of pheasant and capon, seasoned with aromatic extracts and herbs. He is also said to have had in his girdle a tube containing hyppocras.

Æneas Sylvis, in his commentaries on this book, cites a woman of Padua who fasted forty days and nights. He also cites a priest who came to Rome under Nicholas V. from the remote part of Gaul, and who was said to have eaten nothing for four years, except at rare intervals, when his Bishop forced him to swallow a morsal. He stayed for a long time in Rome and was regarded as a saint, but was finally beaten with rods and exiled; since every prodigy is suspected.

The Canon of Noyon is stated in the Noyon Chronicles of 1410 to have abstained from food for three years. He dabbled in astrology and alchemy, scraped skulls of the dead, boiled lizards and adders and distilled poisons and made a "liquor" to stave off hunger. He was summoned to Rome by the predecessor of Nicholas V., Pope Eugen IV., who confided to him the charge of his kitchen. He reduced the expenses in that quarter ninety-five per cent., but finally the servants made such an outcry that the Pope had to send him back to France. He was an agreeable guest, and talked pleasantly while others ate at the dinners to which he was invited, but on his return home he complained of stomach ache to his servant, arising from the smell of the viands, like the Mussulmans, who think that they break their fast by inhaling perfumes. The legend says that the Canon of Noyon got so thin at last that there was nothing left of him but bones and skin, and that he was blown away one gusty winter evening and never seen again.—*Neber Land und Meer.*

Pertinent Brevities.

Just out—The spring chicken.

Visibly affected—A blind man.

A gentleman of polish—A boot-black.

An active member—A circus acrobat.

A marked change—Trading for a branded horse.

A stern-wheeler—An austere personage on a bicycle.

A parting injunction—"Right down the middle, barber."

"A soft answer turneth away wrath"—Few of us care to kick a fool.

Hard to discourage—the banana peel; the public has always sat down on it.—*Detroit Free Press.*