

Science and Art.

A Moon of the Moon.

We have received a letter from E. B. Kenrick, of Cambridgeport, Mass., in which he states he has discovered, by "unentranced clairvoyance," a *lunagen*—composed wholly of gas—revolving round the moon. He announces this discovery now, because there is to be a lunar eclipse on the 25th of this month, during some part of which he supposes a bright spot of solar light may be reflected through the center of the *lunagen's* disk, and discoverable by a telescope, thus affording evidence of the *lunagen* being located about two degrees from the moon's disk. This *lunagen* is a mass of gas, having a diameter three-fifths that of the moon, and a period of revolution amounting to thirty-one hours.

It is our opinion that Mr. Kenrick must have mistaken some flitting cloud in the upper regions for a gaseous attendant of our venerable globe's satellite. The astronomers of the present day are great on gas; the most of them can see far back into the time when the whole universe was nothing but gas; and some of them can see a ring of gas round the earth. We must, however, give the palm to Mr. Kenrick for subtle examinations of the heavens, he having been able to discover such a minute gas bag in a part where no such thing was expected. This *lunagen*, however, may be composed of gas projected from some recent eruption of Tycho—the great burning mountain of the moon—and as we have no telegraph to these regions, no surprise should be felt at the general ignorance prevailing on the subject.

Apples as Food.

This fruit is exceedingly abundant this year, and, as a consequence, the price of it is reasonable. The working people in our cities do not, as a general thing, regard apples as food, but merely as a luxury; this is especially the case with our foreign population. But apples are not estimated according to their real value as an article of food; they hold a low rank in the estimation of most persons in comparison with potatoes, so far as it relates to their nutritive qualities, whereas the best qualities of apples are perhaps superior. In Cornwall, England, the peasantry consider ripe mellow apples superior to potatoes as food, and nearly equal to wheaten bread. In many parts of Europe the laboring people eat sliced apples with their daily bread, and make a hearty healthy meal of them. The finest apples in the world are raised in the United States, and the working people in our cities would do well to use more of them for food, especially during the fall and winter seasons, when they can be obtained cheap. We hope yet to be able to eat apples during the midst of summer (at fair and reasonable prices) as sweet in flavor and rich in nutriment as when plucked from the tree. Much attention is now directed to their perfect preservation during summer's heat and winter's cold.

Rendering Teeth Insensible to Pain.

The Dublin *Hospital Gazette* states that diseased teeth have been rendered insensible to pain by a cement composed of Canada balsam and slacked lime, which is to be inserted in the hollow of a tooth, like a pill. It is stated that such pills afford immediate relief in all toothaches but chronic cases of inflammation. This remedy for toothache is simple, safe, and can easily be tried by any person.

A Polar Coal Region.

E. Meriam, the Brooklyn meteorologist, states that the Arctic Zone is not a barren waste. It will in time be found one of the richest mineral districts of the globe. Coal is abundant there as far north as beyond latitude 75 degrees.

Gold in the Crimea.

It is asserted by a Dr. F. Maynard, of Paris that there is an abundance of gold in the Crimea, and that in ten years it will become the "El Dorado" of the "Old World."

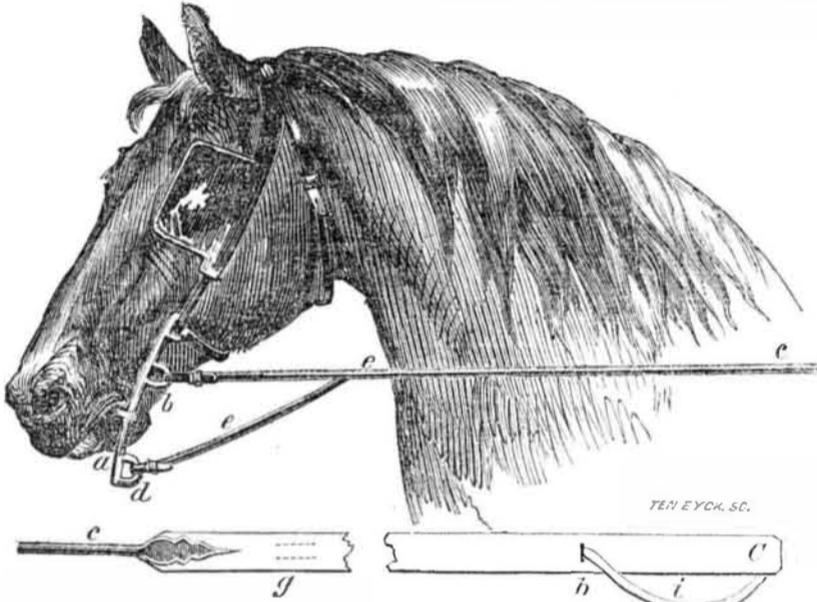
E. Meriam states that a number of earthquakes must have taken place at various points on the earth's surface this season.

GODDARD'S PATENT BRIDLE REIN.

The accompanying figure illustrates the improvement in bridle reins for the better management of horses, for which a patent was granted to Kingston Goddard, of Philadelphia, Pa., on the 24th of July last. The figure represents the curb rein applied to a snaffle bridle—compound snaffle and curb bit. The curb and snaffle bits have long since been combined with a separate and independent bridle for each, but this involves a mass of reins in the hand, which is very troublesome to the rider or driver, producing confusion when a horse takes a sudden start.

The object of this invention is to employ the combined snaffle and curb bits, and avoid the inconvenience and danger arising from the use of two separate reins. The nature of it consists in making the snaffle rein or bridle, tubular for a small portion of its length, on each side, and passing the curb rein through such tube, then out near the hand of the driver, forming a loop to be grasped by the hand in cases of danger, to control the curb bit.

a is one of the levers of the curb bit, of the usual construction. *b* is a ring, to which is secured one end of the snaffle rein, *c*. At the

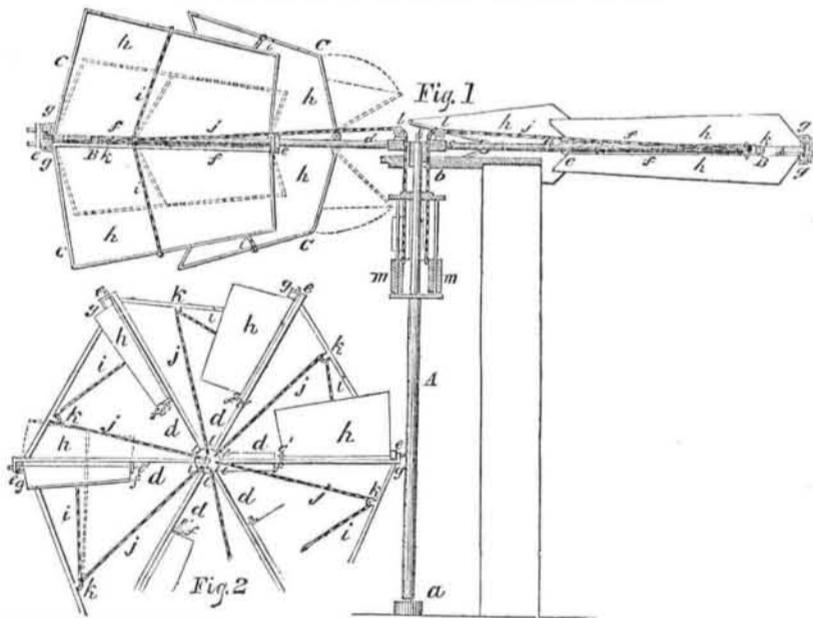


lower end of the lever is another ring, *d*, to which is secured the curb rein, *e*. The opposite side of the bridle and reins is the same as the right side. The snaffle rein, *c*, is made tubular from about nine inches from the bit, as shown at *g*, in the detached open rein, *C*. The rein, *c*, receives the curb rein at the junction, *e*, as shown, and it (the curb rein,) comes out again at *h*, in the detached rein, near the place where the snaffle rein is grasped by the hand. The curb rein forms a loop, *i*, near the hand of the driver or rider, and it is thus ready to be grasped in case of danger, to rein up the ani-

mal. The tubular part of the snaffle rein is made sufficiently large to allow the curb rein, *e*, to pass through it; the latter should be of a cord, or round form, and of sufficient strength. For ordinary riding or driving, one rein only is grasped by the hand, but in case of the horse starting off, or when an accident occurs requiring him to be instantly stopped, the curb rein at *i* is convenient for the hand to control the animal suddenly and effectually.

More information may be obtained by letter addressed to Mr. W. B. Goddard, at Knorr & Nece's, Saddlery Warehouse, Philadelphia.

MORGAN'S PATENT WINDMILL.



The accompanying engravings represent an improvement in Windmills for which a patent was granted to J. S. Morgan, of Highland, Madison Co., Ill., on the 17th of July last. Fig. 1 is a side elevation of the windmill, and fig. 2 is a top view of it. Similar letters refer to like parts.

The nature of the invention consists in having the sails or wings attached to the ends of horizontal radial arms or wings, and arranged in pairs, one above and one below the end of each arm, the sails or wings being connected by pinions, so that they will rise and fall simultaneously. The sails or wings have cords attached to them, to which weights are connected and arranged so that a greater or less area of the wings or sails will be presented to the action of the wind according to its velocity, and the mill will be made to receive uniform motion therefrom, however variable it may be.

A represents a vertical shaft. The lower end of it runs in a suitable step, *a*, and its upper end is fitted in a suitable bearing, *b*, attached to proper frame-work. To the top of the shaft there is attached a hub or boss, *c*, to which horizontal radial arms, *d*, are connected, any suitable number being employed. The ends of these arms are connected to a rim, *B*, which serves to brace them. At the ends of the arms, *d*, there are attached small plates, *e*, and center plates, *e'*, two plates on each arm. These plates form bearings for two shafts, *f, f'*, that is, two shafts to each arm, one being directly over the other, and connected by pinions, *g, g'*, which gear into each other. To the shafts, *f, f'*, there are attached wings or sails, *h, h'*, one to each shaft. The wings or sails may be formed of cloth, wood, sheet metal, or any proper material. If constructed of cloth, the cloth, of course, will be stretched over frames,

c. To each wing or sail there is attached a cord or chain, *i*, at about the center of their edges, as shown in fig. 1. These cords or chains are connected to cords or chains, *j*, which pass through pulleys, *k*, attached to the rim, *B*, and through pulleys, *l*, in the hub or boss, *c*. The lower ends of the cords or chains, *j*, have weights, *m*, attached to them, as shown in fig. 1. In consequence of each pair of shafts, *f, f'*, being connected by pinions, *g, g'*, one shaft will move simultaneously with the other, and also the sails or wings, *h, h'*, but in opposite directions, that is, towards or from each other.

When the mill is in operation, the wind will open or expand the sails or wings, and cause the wind wheel to rotate, the wings or sails being in a vertical position, but the wind cannot throw the wings or sails over or beyond a vertical position without raising the weights, *m*, the cords or chains, *j*, being of such a length to allow this. The weights when not raised by the action of the sails or wings, rest upon a circular plate attached to the vertical shaft, *A*. Thus it will be seen that a light or moderate breeze will expand the sails so that they will be in a vertical position, and present their whole surface or area to the action of the wind; but if the wind increases, the wings or sails will be thrown over or beyond a vertical position, raising the weights, *m*, and presenting a less area or surface to the wind, and consequently equalizing the speed of the mill. The wings or sails, of course, close when moving in the face, or towards the wind, as the weights only act upon them when moved in one direction.

This is another windmill presented to the attention of the public. The object of the improvement is to obtain a simple means of self-regulating the sail surface, to be exposed to the wind according to the force of the latter.

More information respecting it may be obtained by letter addressed to the patentee at Highland, Ill. See advertisement on another page.



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