SCIENTIFIC MUSEUM.

Moles.

At this season of the year many of our farmers and gardners are pestered with moles burrowing in their fields and gardens, and eating up young and tender roots of plants and herbs. Some directions regarding the modes of destroying these creatures, will, we believe, be very acceptable to many of our readers at this time.

The principles of mole catching are founded on the following facts :—" A mole in forming its perpendicular passages under ground, throws back the mould which it removes towards the surface, and thus forms hills.—Upon every new change of place a mole raises three, four, six or more hills according to its age, consequently all the mole-hills formed by one mole communicate by subterranean passages with one another. If a tunnel or passage recently formed by a mole is opened by an instrument, the mole will in a few minutes return to close it, in order to secure itself from danger and the external air. It constructs over the aperture an arch of loose mould, and mends the tunnels as a plumber mends a lead pipe, and should this new molehlll be broken down, the mole will return to repair it. The male mole is stronger than the female, and raises a greater number of hills, and larger ones. Young moles form only long covered ways at the surface; when they begin to make hills they are small and arranged zig zag, without regularity. The hours of working for moles are at sun rise, about 9 A. M., at noon, at 3 P. M., and at sunset. It is at sunrise and sunset, however, when they work with the greatest vigor.

It is difficult to take moles except when they are at work, and the most favorable time for catching them is in the spring; they should be vigorously attacked at the present time, during their working hours, and sunrise is the best time. In watching for a mole, care must be exercised to make no noise by stamping or beating. Should a person be near a mole-hill when the mole stirs the mould, let him then, with his hoe, break into the passage between that and the next mole hill, and let him with a little earth close up the passage at the aperture made with his hoe; the mole will then be imprisonend between the mole-hill and the place where his passage has been broken into and stopped up. It the earth of the hill is fresh and newly raised, it may be concluded that a mole is within it, except when an aperture is left in the centre, which is an evidence that the mole has left his residence for a better. By pouring in enough of water into the tunnels between the mole hills, the animal can always be forced out. When a number of fresh mole hills are found together they should be vigorously attacked with a hoe by removing them and opening up the passages communicating among them, when the mole will be sure to be found within, but the most simple way to catch moles is to confine them between their passages as has been described. A close attention to these facts will soon enable any farmer to rid his farm of moles, especilaly if he has a terrier dog to assist him.

Devotion to Science.

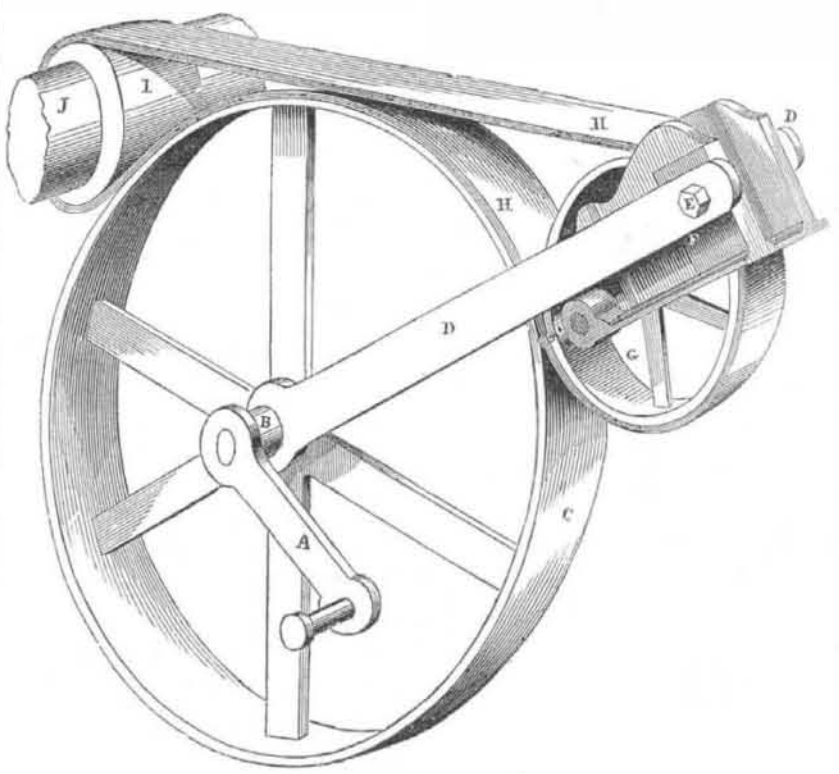
Mr. Lassell, of Liverpool, has transported his wonderful telescope (having twenty focal feet) to Malta, and under the beautiful sky of this island he has found incomparable advantages for observing his favorite planets, with whose study he has been for some years occupied, namely, Saturn, Uranus, and Neptune. Mr. Lassell has seen the first and second satellites of Saturn very distinctly. On the body of Saturn itself he has been able to observe two red-colored bands and three of a neutral or greenish blue color. He has found also the two new satellites of Uranus.

Mr. Lassell, who, from being a merchant, has become an amateur astronomer, and has himself constructed his magnificent telescope, and who has invented some absolutely perfect instruments, is himself quite astonished at what he has been able to effect at Malta, where he has made more observations in one single night, than in three months at Liverpool.

Banding Pulleys for Saws, &c.

The annexed engraving is a perspective view of an improvement in operating machinery such as circular and upright saws, pumps—in short any machine driven by belts and pulleys. The inventor is Robert W. Parker, of Roxbury, Norfolk Co., Mass., who secured a patent for the same on the 17th March, 1852. The nature of the invention consists in driving machinery, such as circular and vertical saws, blowers, rotary pumps, &c., by a peculiar arrangement of belt and pulleys, by which the main driving pulley is made to pinch the band at the points in the intermediate pulleys with any desired force. It obviates much of the friction attendant upon the ordinary modes of driving saws and other machinery.

In the figure A represents the crank to drive the power wheel, C. B is the main shaft of this wheel, and D is an arm (there is a similar one on the other side) on said shaft, extending out and supporting the frame, F, of a small pulley, G. This frame is hung by the axis, E, passing through the outer ends of two arms, D D. The pulley has its axis in the frame, F, which is allowed slightly to rise and fall to pinch the belt, H, which passes over pulley G, (and the lower part over wheel C), and around the small pulley, I, which drives shaft or spindle, J, on which may be a circular or scroll saw, or a blower or circular pump, &c.



It will be observed by this arrangement of band and pulleys, that the driving pulley is really the wheel C. The arrangement by the swinging pulley, G, pinches the belt, H, on the periphery of said wheel, C, so as to press with any degree of force against it and the pulleys, G I. By this arrangement a great velocity can be communicated to the belt by hand power. No less than 2600 revolutions have been given in one minute to a small circular saw, and one man enabled thereby to saw through a three inch plank.

This mode of banding pulleys appears to us to be a most excellent improvement, and is specially adapted to almost all portable machines, as well as those driven by steam power. It is well adapted, as we have seen for ourselves, for circular and scroll sawing, both for ripping, cross-cutting, rabbetting, &c.

The claim is as follows :—" Arranging the driving pulley (C) in reference to pulleys (G I) that the band passing over these pulleys is not only pressed with any desired force against the periphery of the driver (C), but is also pinched between C I and C G, they operating upon the band as feed pulleys, in the manner represented and described.

This method of banding may be seen applied to portable circular sawing at D. Miller's, 110 East Thirteenth street, between Third and Fourth avenues, New York City.

Shirt Collars by the Bushel.

The city of Troy has long been famous for shirt making and its shirt collars. The "Troy Whig" says :—

"There are here a large number of manufacturers, who employ from five hundred to fifteen hundred females each, on their work, besides some half dozen establishments in which the article is manufactured by machines. We know of one house in which about forty machines are used, and another where there are some thirty, and they are increased as rapidly as they can be supplied. We are told that the collars made by machine are quite as good as those made by hand. Cost by machine, per dozen, for making :—

Running	4 cents
Turning	3 "
Stitching	4 "
Banding	12 "
Thread and ironing (before stitching)	2 "
Total	25

Throwing out the cost of machines (which is about $125 each for those used here,) the expense of keeping them in order, &c., and there is an apparent difference of about 12½ cents. It is probable, however, that after making a proper allowance for this, the difference in the expense of the two systems will be slight. But a very slight saving on a dozen, where so many thousand dozens are turned off, must affect materially a year's profits. Those who manufacture machinery have an advantage, from the fact that their business may be kept principally under their own eyes. While those who continue under the old system, must send the greater proportion of their work to a distance, frequently more than fifty miles. On the other hand, those who employ hand sewers, avoid rent, fuel, &c., which have to be provided by machine workers.

Specimen from the Iron Mountain, Mo.

The "St. Louis Republic" says a curiosity will be presented at the World's Fair, in New York, that will surprise most mineralogists, and the learned and curious in these matters. It is from the pilot knob. On the summit of the Knob, which bears evidence of having been, at one time, subject to volcanic action, and where immense sheets of iron have been thrown out, of various thickness, length, and breadth—many standing in the very position and inclination that the last throe of the internal furnace poured them out—there is one of immense width, length, and breadth, but nearly of uniform thickness. A portion of this slab, several feet in length and breadth, has been detached, and will be sent to the World's Fair. It will be by far the largest sample ore of such purity, that has ever been seen by those who have not visited the Knob and Iron Mountain, and yet will be but an imperfect representation of the ores there. Some very important and extraordinary developments have been made in the face of the Shepherd Mountain. This mountain faces the Knob, separated only by a small valley. In prosecuting, a vein has been discovered, and there are doubtless hundreds of others, more extraordinary than anything yet supposed to exist in that region.

Mineral Wealth of California.

A meeting of the stockholders of some mining tracks was recently held in London, at which it was stated that coal had been discovered by some miners sent out from London. They had also found a mine of quicksilver, which the company intended to work, as it was considered more profitable than operating on gold quartz. Two large steam engines of 100 horse power each, have been sent from England, but as yet no returns have been forthcoming.

A meteor recently fell on the tower of Lincoln Cathedral, England, and set fire to one of the pinnacles during a violent snow storm. A ball of fire descended upon the centre tower of the cathedral, and burst with a loud explosion, emitting beautiful rose-colored flames and accompanied by a flash like lightning. No other signs of electricity in the air either preceded or succeeded the appearance of the meteor.

Since November 21st, 1852, there have been thirty two shocks of earthquakes within the limits of California.

LITERARY NOTICES.

BOOK OF THE WORLD, No. 8, Weik & Wieck, 195 Chestnut st., Philadelphia. This periodical publication is as interesting as ever; the current number contains a choice collection of reading matter for all. It is illustrated with the usual number of plates, and when completed, it will be a valuable work for information on natural history. In this last named department it excels in the beauty of its plates the generality of the works that are devoted to this interesting subject.

THE ANTI LANCET —This is a new medical monthly, devoted to the chrono thermal system. and is an advocate for female medical education It is published by G. H. Whitney, Providence, R. I Of course it is opposed to the lancet—blood letting for disease. We hope it will not be a lancet in literature, but be temperate in language. We regret to see so many hard words used in a number of journals devoted to the medical profession : we certainly think the Allopathists are getting a tremendous scalping and lancing on every hand, and the Homœopathists, if agreed upon small doses for common patients, agree heartily in prescribing huge doses for Allopathists. Strictly speaking the Chrono-Thermal practice is Allopathy in principle.

PERFUMERY—ITS MANUFACTURE AND USE—By C. Morfitt, P. C., published by H. C. Baird This work on Perfumery presents all the receipts and modes of making hair oils, pomatums, hair washes, face powders, cosmetics for the skin and lips, perfumes of every description, and we know notall what beside. It is an exceedingly useful book to those who manufacture perfumery on a large scale, and for those who would desire to make their own for personal use. Scented soaps, pastiles, &c.. are described, and so minutely are the different processes given, that any one of ordinary understanding can repeat them. It is an excellent book, and one particularly essential, to a good family library. It is for sale by Stringer & Townsend, this city.