

The convexity of the earth interposes to prevent the sight of distant bodies. Thus, at 600 yards, one inch would be concealed, or an object one inch high would not be seen in a straight line; at 900 yards, two inches; at 1400 yards, five inches; at one mile, eight inches; three miles, six feet; four miles, ten feet; five miles, sixteen feet; six miles, twenty-four feet; ten miles, 66 feet; 12 miles, 95 feet; 13 miles, 112 feet, and 14 miles, 130 feet.

The mechanical powers may be reduced to three, but they are usually expressed at six—the level, the wheel and axle, the pulley, the inclined plane, the screw and the wedge.

In a single moveable pulley, the power gained is doubled. In a continued combination, the power is twice the number of pulleys, less 1.

In levers, the power is reciprocally as the lengths are each side the fulcrum or centre of motion, as illustrated in the steelyards.

The power gained in the wheel and axle is at the radius of the wheel to that of the axle.

The power gained by an inclined plane is as the length to the height.

The power of the wedge is generally as the length to the thickness of the back.

The power of the screw is as the circumference to the distance of the thread, or as 6,2832 to that distance.

Resistance is an affair of experiment, sometimes a third and at other times less.

The friction of cylinders or wheels is as the pressure, and inversely as the diameter.

The least friction is when polished iron moves on brass.

The area of a circle is the product of the diameter and circumference, divided by 4.

A fall of one tenth of an inch per mile, will produce a motion in rivers. The greatest velocity is at the surface and in the middle, and the least at the bottom and sides. But as the velocity increases, the action on the sides and bottom increases also.

Eclipses return in the very same order every 18 years and 11 days, supposing four leap years in the interval, and if five, then every ten days. Other cycles of motion, however vary the phenomenon or measure. The moon's shadow is less than 170 miles broad; but the eclipse, in degree, for 2000 miles.

A pump ten feet above a well, with seven inches bore will discharge seventy gallons a minute; and at 30 feet 4 inches, 23 gallons.

The specific gravity of water, being 1000; that of alcohol, pure 0.829; beer, 1.034; cider, 1.018; milk, 1.032; oil, linseed, 0.94; vinegar, 1.025; sea-water, 1.026; bone, ox, 1.666; brass, 7.824; brick, 2; cork, .24; gold, 19.2587; granite, 2.728; iron, bar, 7.68; lead, 11.352; lignumvite, 1.33; mahogany, 1.06; marble 2.716; mercury, 12.58; oak, 1.17; platina, 20.722; silver, 10.474; slate-clay, 2.67; tin, 10.717; lime-stone, 1.386; elm, 9.771; honey, 1.45.—*Treasury of Knowledge.*

BROKEN WIND HORSES—A great number of dissections have proved that the cause of this disease is a rupture of the air vessels in the lungs. The difficulty of breathing which some persons experience after unusual or prolonged effort, would seem to arise from the same cause, and there is some reason to think that the disease may be hereditary. This is an important suggestion, so far as the human race is concerned.

“Dr. Jackson found that of 28 persons affected with this rupture of the air cells, 18 were the offspring of parents (father or mother,) affected with the same disease, and several of them had died from this cause. In some instances the brothers and sisters of these persons were similarly affected. On the other hand of 50 persons unaffected with the disease, three only were the offspring of parents who had suffered from it; whence it follows that rupture of the air cells of the lungs is frequently a hereditary disease; a fact important to man and horse, at all events to the breeder of the latter.—*Medico Chirurgical Rev.*”

OLD LIME PLASTER ON WHEAT.—A writer in the Farmer's Gazette says he sowed two pieces of spring wheat after brining and rolling the seed in slacked lime. On one of these fields he sowed or spread a number of loads of old plaster from the walls of old houses, and harrowed it in with the seed. Both fields were entirely free from smut, which that year was generally ruinous to wheat, but the wheat of the field where no lime was used, (ex-

cept for rolling the seed,) was badly shrunk; while that which grew on the field well sprinkled with old plaster, was good, sound, plump wheat.

SHEEP WITH FOUL NOSES.—The American Farmer says:—Make a small mop or swab, by wrapping a rag about the end of a stick—dip this in tar, taking up as much as will adhere to it—roll this in salt and then thrusting it into the sheep's mouth, hold it there till he is forced to withdraw and swallow the tar and the salt, and your sheep will soon get good health and clean noses.

CENTRAL AGRICULTURAL BOARD.—To be Sold by Public Auction, to the highest bidder, at Studley, on Wednesday the 27th Oct. at 11 o'clock.

The Canadian Stallion lately imported from, and named “MONTREAL.” This beautiful animal is about 14½ hands high, 5 years old, of a dark brown colour and cost £75, to which the expense of importation is to be added, being about £15.

Also, the following STOCK expected by the Prince George from London.

A Prime Bull, Short Horned Durham breed, 17 months old, cost in London 40 guineas.

Another Bull of the same breed 18 months old, cost 35 guineas.

A Heifer of the same breed 2 years old in Calf, cost 25 guineas.

A prime Bull of the Hereford breed, cost about 30 guineas.

A Heifer of the same breed 2 years old in Calf, cost about 20 guineas.

Six Rams of the Cheviot breed, cost in London £5 each

Three Southdown Ewes, and three Leicester Ewes, cost 5 guineas each.

Seven Boars, and Four Sows, of the Improved Essex, Berkshire and Suffolk breeds, cost from 4 to 5 guineas each.

Also.

Six Boars, and Six Sows of the Improved Berkshire and Me. Kay breed, cost in Boston 10dols. each, expected from Boston by first vessel.

All the above Stock was purchased from Breeders of high character, selected with great care, and invoiced at fair prices, the difference of exchange, freight, insurance and other charges will raise the cost of each Animal landed here from Britain about 75 per cent. The only other importations expected this year are 23 Southdown and Leicester Tups in the Fanny from London, shipped for the Societies at Aylesford, Antigonish and Port Hood, the other orders not being in time; and a Bull and Heifer of the west highland breed ordered from Greenock.

As the main object of the board is to propagate and preserve the best breeds, and diffuse them throughout the Province, bonds, in the form that has been settled and lodged with the Secretary, will be required, with two unexceptionable sureties, from each purchaser, and will be strictly enforced pursuant to the Act.—Societies intending to purchase will please appoint agents to attend the sale, as the Board, or its individual members, cannot interfere, or act as such, but will leave the sale open and free to competitors. The funds will be devoted to new importations, to be in like manner offered for sale in Halifax, or elsewhere, as may appear most advisable, Halifax having been thought the most suitable place for this sale, and the terms will be, Cash on delivery.

A number of Agricultural implements chiefly imported for the Societies and of the most approved models have been deposited for a few days in the Hall of the Province Building with the price annexed, among which are Subsoil and other Ploughs, vegetable and straw Cutters, a Winnowing Machine, Horse Rake, &c.—Any person desiring to take models or to import for his own use is invited to inspect them.

Halifax, September 30. 1841.

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