

MECHANICS.

"Out of nothing—nothing comes."

The laws of nature, unlike human laws, can neither be changed nor evaded; and, for want of a proper knowledge of simple and unchangeable laws, many men waste time and money in trying to produce great effects by insufficient means. The mechanical powers, as they are called, do not, and never can, create power—they only modify its application. The power most easily measured, is that of gravity, or weight: and it is the cheapest of all powers, or first movers, when, as in the case of a waterfall, nature constantly winds up the weight for us for nothing. Suppose then we have one thousand pounds of water falling ten feet in a minute. No human contrivance can make that water raise more than its own weight to the height of ten feet in the same time. It cannot raise quite as much, for the friction of the machinery must waste part of the power; but, as it may be a part let us omit the small friction from these calculations.

The effect of the mechanical powers is to enable us, while our original power remains the same, and the rate of its motion the same, to exert a greater power with a slower motion, or a lesser power with a quicker motion. But, in all such cases, the power produced multiplied by the speed with which it moves, will be found to give the same product. Thus one thousand pounds falling ten feet in a minute, may be made to raise ten thousand pounds one foot in a minute, or one hundred pounds one hundred feet in a minute, the same power being required in each case: but no man can make it do more, for if he did, he would create something out of nothing, which is contrary to a law of nature. For this reason all attempts to make a mechanical perpetual motion have failed, and forever must fail! as such a machine would be equivalent to making a weight raise another equal to itself to the same height in the same time, and enough more to overcome the unavoidable friction of the machine, which friction, however small, is certain sooner or later, to stop the motion, unless additional power is applied, sufficient to overcome the friction. Therefore every man who is trying to make a perpetual motion, or any machine which he expects to do more than the power applied to work it, is wasting his time and money in that which will be certain to end in disappointment.—*Exchange*.

PRESERVING GRAPES.

The following method of preserving grapes, from the *American Agriculturist*, is worthy of trial:

My mode of gathering and preserving grapes for Winter use is as follows:—When they are fully ripe, suspend a basket by a strap of cord passed around the neck, thereby giving liberty to both hands for picking; with one hand hold the cluster, and with the other cut it from the vine: remove from the clusters all unripe or decayed fruit, and deposit them in the basket until it is filled. (I use a market basket that will hold about a half bushel.)—Carry the grapes thus gathered to the place for packing. I use boxes about two feet square by six inches deep in the clear, with covers made to shut tight. In packing lay a newspaper on the bottom of the box, then a layer of grapes, then a paper and a second layer of grapes, which, when closely packed usually fills the box; set the box in some dry and airy place, with the cover open or off, and let the box remain open for ten days, or until the sweating process is passed; then close the box and set it in the fruit room, cellar or garret, any place where the fruit will not freeze, or which is not extremely damp.

Grapes packed as above directed, will open at any time during Winter or Spring following, as fresh as when packed. The only secret or mystery is, that the moisture which spoils the fruit when packed in saw dust and other absorbents, passes off during the ten days that the box remains open, instead of being absorbed, and remaining to keep the grapes damp, and ultimately mould and spoil them. I have practiced this method for several years without the loss of a single bunch of grapes. So perfect has been my success that I have more confidence in the preservation of the grape than any other fruit. I use *shallow* boxes for packing grapes, that the moisture may the more readily escape, and that the first layer in the bottom may not be crushed, by the weight above.

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