

The evidences of an increase in the temperature of the interior are these: the higher temperature of the earth in all artificial excavations of considerable depth; the existence of thermal springs; and the existence and distribution of volcanoes.

Proof 1.—There are three sources of information from artificial excavations. 1. The temperature of springs which issue from the rocks in mines. 2. The temperature of the rock itself in mines. 3. The temperature of the water from Artesian wells. The following table gives many of the particulars:

TEMPERATURE OF SPRINGS IN MINES.

COUNTRIES.	MINES.	Depth in feet.	Temperature.	Mean temperature at surface.	Depth in feet for one degree Fahrenheit.
Saxony.....	Lead and Silver Mine of Junghohe Birk.....	256	48.9°	46.9°	102.4
	do of Beschertgluck.....	712	54.5	46.4	87.
Brittany	do of Poullauen.....	128	53.4	52.7	182.
	do of Huelgoet.....	197	54.	51.8	69.5
Cornwall.....	Dolcoath Mine.....	1440	82.	50.	45.
Mexico.....	Guanaxato, Silver Mine.....	1718	98.2	68.8	45.8
TEMPERATURE OF THE ROCK IN MINES.					
1. In loose matter near the face of the rock.					
Cornwall.....	United Copper Mines.....	1142	87.4	50	80.5
		1201	88.		81.1
Carmeaux, Fr..	Coal Pit of Ravin.....	597	62.8	52	55.8
	do of Castellan.....	680	67.1	52	40.8
2. In the rock near its surface.					
Saxony.....	Mine of Beschertgluck.....	891	52.2		101.
	do do	818	59.	46.4	67.
	do do	1246	65.7		64.4
3. Three feet three inches within the rock.					
Cornwall.....	Dolcoath Mine. Register kept 18 months	1881	75.6	50.	54.
Saxony	Lead and Silver Mine of Kurpinz..	413	59.6		81.3
	do do do ..	686	62.5		42.6
	do do do ..	1063	67.7		49.9
E. Virginia....	Coal Mines.....	780	68.7	56.7	60.
TEMPERATURE OF ARTESIAN WELLS.					
Paris, near the Barrier de Grenelle.....		1800	83.	51.1	50.
Paris, Fountain de St. Venant.....		323	57.2		49.
Tours.....		459	63.5	52.7	42.5
La Rochelle.....		369	64.6	53.4	33.
Near Berlin, in Prussia.....		675	67.6	49.1	86.8
Louisville, Ky.....		2086	76.5		
Charleston, S. C.....		910	69.	82.3	64.
New Brunswick, N. J.....		394	54.		72.

Artesian wells have lately been applied with success in Wurtemberg, to prevent frost from stopping machinery which was moved by running water, and also for warming a paper manufactory. Who knows but this application may prove of immense benefit to some regions of the globe?

The increase of temperature from the surface of the earth downwards does