

DOES SUNSHINE TEND TO EXTINGUISH FIRE?

The common opinion that the sun shining on a fire tends to extinguish it, and that consequently the embers must be shaded, if we would preserve them alive in a fire place, was made the subject of experiment in the year 1825 by Dr. Thomas McKeever, of England, and the results seemed to show a real foundation for the opinion that solar light does actually retard the process of combustion. These results were copied by the contemporary scientific journals, and even the great German chemist, Leopold Gmelin, in his *Hand-book of Chemistry*, announces Dr. McKeever's conclusions, without expressing any misgivings in relation to their accuracy. Sunshine is an agent which is certainly capable of producing very remarkable effects; but the disagreement of this with other facts, has recently led Dr. John LeConte, Professor of Natural Philosophy in the South Carolina College, to repeat the experiments of McKeever, but using greater care; and the results obtained, as detailed by him at the late meeting at Montreal, tend to overthrow the idea, and prove that light has no influence whatever on the rate of combustion.

The fire employed in both the sets of experiments was simply a wax candle. McKeever found it to burn about 12 per cent faster in the dark; but LeConte finds the light of the sun, even when concentrated by a large lens produces no effect except by heating. If the air in the dark be heated to the same extent, and the air in each case be kept equally quiet, the candle burns at precisely the same rate. McKeever's experiments indicated that the candle burned from 5 to 11 per cent faster in the dark than in common sunshine. He supposed that the chemical rays exercised a deoxidizing power which, to some extent, interfered with the rapid oxydation of the combustible matter, and by trying the candle in different parts of the colored spectrum (produced by decomposing a ray of light in passing it through a prism,) his experiments appeared to indicate that a taper burned more rapidly in the red than in the violet extremity of the solar spectrum.

The whole subject cannot as yet be considered definitely settled, as the recent paper is regarded as merely preliminary to a more thorough experimental investigation, which Dr. LeConte proposes to undertake during the next twelve months. It is obvious that these researches have a practical bearing.

AN OPEN WINTER is predicted by our exchanges, both East and West. Some aver that the appearance of robins in large numbers during the warm days of Nov., indicates an open, mild winter. A Chicago paper says that Nature has demonstrated the fact that the coming winter will be mild, by covering the ears of Indian corn with very thin husks this year—furnishing them, indeed, nearly “nothing to wear”—whereas they were abundantly clothed the two preceding seasons! Well, we trust the augury is correct—for a mild winter will not only prove a God-send to the suffering poor of our cities and villages, but an oasis to the farmers and their flocks and herds over a large extent of country.

NATURAL HIEROGLYPHICS.—Grand animals trod this globe in hundreds of thousands, for thousand of years, and left their skeletons behind; and the geologist uncovers their strange forms from the ice gravel of Russia, the mud of Pampas, and the gypsum of Montmartre, and learns to decipher their history, as Rawlinson interpreted the cuneiform inscriptions of Babylon and Nineveh, not passage by passage and line by line, but letter by letter, bone by bone, tooth by tooth, and stratum by stratum, till the disinterred skeletons became living witnesses, and the bygone history of myriads of past ages stand forth revealed.—*Stones of the Valley*.

THE ATLANTIC CABLE.—Active preparations are making to lay the Atlantic cable next June. Four hundred additional miles of cable have been ordered, and if the effort to recover the 340 miles now submerged should be successful, that amount also will be added, so that the length of the cable will be nearly 3,000 miles. The British Government has signified its intention to detach two vessels from the navy next year to assist in the work, and it is presumed that the American Government will also repeat the favor of last year.

FARMERS NOTE THIS.—In a cloudy morning, it is a matter of importance to the farmer to know whether it will be sunshiny or showery in the afternoon. If the ants have cleared their holes nicely, and piled the dirt up high, it seldom fails to bring a clear day to the farmer.—Spider webs will be very numerous about the tops of the grass and grain, some cloudy mornings; and fifty years' observation has shown that those little weather-guessers seldom fail in their predictions of a fair day.