rior walls; hence the course of the air about the rooms would be that of the natural currents from the inner to outer wall across the ceiling to the floor and out by the lower registers on the opposite side of the room. An upper register in each room, kept closed during winter but open in summer, conveys the warm air by the same channel, with the vitiated air away from the building.

The supplementary coils, heated by the waste steam from the engine which drives the fan, and by additional live steam when needed, are capable of raising the temperature of the air from that of the air chamber, namely, 60° to 100°; so that, if at any time any room requires a temperature exceeding the former, the steam is admitted to that particular coil, and the valve adjusted to regulate the supply; in passing over the heated coils the air acquires a temperature sufficient to communicate to the rooms above the desired warmth. The temperature of the air as it reaches the rooms rarely reaches 100°, even in the coldest weather, and in ordinary weather does not exceed 80°, the aim being to supply large volumes of moderately heated air rather than a small quantity highly heated.

Communication with the basement from each room is promised, so that a change of temperature or air supply may be easily made, there being below in the mouth of each flue a thermometer and anemometer, thus indicating to the man in charge the probable temperature and rate of change of air in the rooms above. It is here that these regulations should be made, and not by closing the inlet registers: else all ventilation will cease.

It will seldom happen that all the rooms in the building will be needed at the same time; therefore a more frequent removal of air in the separate rooms than has been stated, the usual change being every ten or twelve minutes, the rate of change depending upon the use of the rooms.

This free circulation of currents may explain the otherwise unaccountable blowing of flames occasionally noticed in the organic laboratory.

Nothing new is claimed for the system except large inlet areas and free space for the passage of the air, and even these might well be increased in size; thus the inlet registers, if still larger, would allow the air to ooze gently forth instead of issuing forcibly as a current. Neither is it claimed to lessen the expense of heating, but it is hoped to secure both perfect ventilation and uniform heating without need of open doors or windows, and thus to impart increased physical and intellectual vigor to the students.

X. Y.

The Remarkable Sunsets.

It may be worth while to give a brief résumé of the facts connected with the late brilliant sunsets which have been observed in so many and various parts of the earth. There are three theories as to their cause more or less satisfactory. The first and most probable one is that the extreme violence of the eruption at Krakatoa in August last served to project volcanic matter into the upper strata of air where it was held in suspension, condensing the moisture, which thus reflects the red and orange light we have noticed.

The explanation that they are due to unusually high strata of moist air with accompanying multitudes of ice particles is also possible; but Mr. R. A. Proctor thinks it is improbable on account of the absence of extraordinary meteorological phenomena, and the hypothesis which he has framed supposes "a cloud of meteoric dust encountered by the earth and received into the upper region of air," and thence penetrating slowly to the earth's surface.

In "Nature" for December 20, we may trace the apparent path taken by the volcanic dust from place to place, also the interesting results of examinations of it as brought down by the rain; and it is worth while to remark here that by either of the above theories a heavy precipitation of rain may be expected,—in other words, a wet winter. In the tropics the phenomena clothed themselves in green light, while in the higher latitudes the "red suns" are the characteristics.

Mr. McPherson, an eminent geologist now in Madrid, made an analysis of some fresh-fallen