RH	RH_2	RH_3	RH_4	RH_3	RH_2	RH	...
$Li(CH_3)$	$Be(CH_3)_2$	BH_3	CH_4	NH_3	OH_2	FH	...
$Na(CH_3)$	.....	$Al(CH_3)_3$	SiH_4	PH_3	SH_2	ClH	...

The maximum combining capacity for hydrogen (four) is reached in the middle of the series, from which there is a decrease to one. The point to be noted in these tables is that *each series* shows with more or less completeness the *same* regular variation in the combining capacity of its elements. Similar tables can be made for the hydroxides, chlorides, bromides, iodides, etc.

The periodic recurrence of like properties is found, too, in those physical properties which can be exactly measured and expressed mathematically. Such are specific weight, conductivity for heat and electricity, melting point, boiling point, etc. If the combining weights of the elements be divided by their specific weights for the solid state, the numbers obtained are the relative volumes of the combining weights of the elements. They are the *combining volumes* of the *solid* elements. Most of the elements have been obtained in the solid state, so that the table of combining volumes is pretty complete. The relation of the combining weights to the combining volumes of the (solid) elements can best be shown by measuring off from two lines meeting at right angles distances proportional to the combining weight and combining volume of each element, and connecting the points thus obtained by a continuous line. Thus is obtained the *curve* of combining weights and combining volumes. This is called a *periodic curve*, consisting, as it does, of a series of waves.