(*b*) The formation of benzene as a constant product of the decomposition of the other members of the aromatic series.

(*c*) The formation of hexa-additive compounds (and no more) and the ready breaking up of these into a tri-substitution product.

(*d*) The formation of three di-substitution products.

(*e*) The evident "saturated" nature of benzene.

It is clear from (*c*) that there can be only six unsatisfied affinities, so, if the model is bent round to form a circle, as in Fig. 2, thus linking the first carbon atom to the last, the number of unsatisfied affinities is shown as being reduced to six, and, in addition, each carbon and hydrogen atom is represented as bearing the same relation to the molecule, all being similarly linked.

FIG. 2

But the fourth valence of the carbon atoms still appears as unoccupied; these may be represented as acting *towards* the centre—as in the Armstrong-Baeyer formula, or the diagonally opposite atoms may be linked together (Claus); figure 3. If this is done, the model will then represent an exceedingly stable molecule.

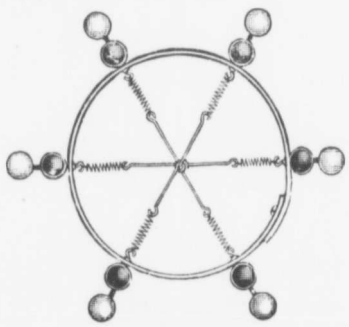

FIG. 3

Small spiral springs are used in the interior of the "ring," to permit of the rapid and secure fastening together of the diagonally opposite