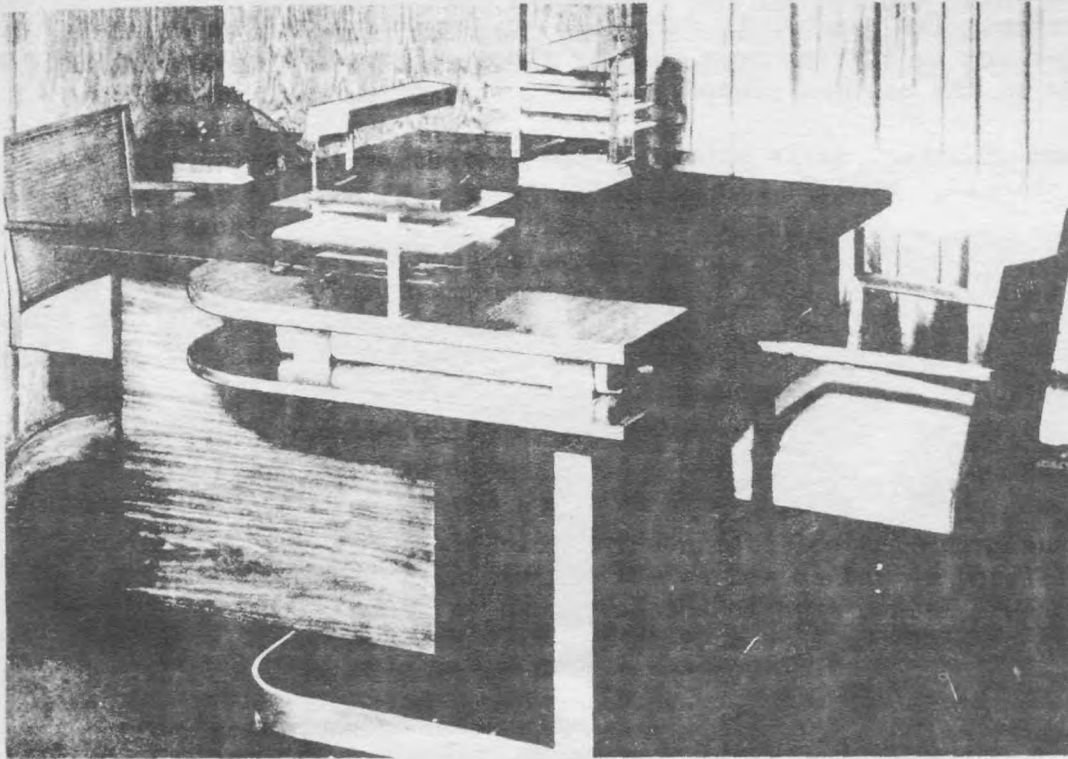


## STORIES of New Jersey

In 1907 he was successful in obtaining a hard substance by combining phenol and formaldehyde. This new material had many of the properties of amber, but it was much stronger and harder, and it was almost impervious to heat. Once it had taken form under terrific heat, nothing could melt it. The new substance was called Bakelite resinoid after its inventor.



Modern desk with a laminated plastic top.

At the time of its invention, Dr. Baekeland estimated that this new product could be used in 43 industries. Today, when Bakelite is used in hundreds of different ways, we are amazed at Dr. Baekeland's modesty. Bakelite was first introduced to industry when at the request of an electrical company, the Boonton Rubber Company, Boonton, N.J., molded it for use as insulating material.

The elements from which plastics are made are found in vegetable matter, animal matter, mineral matter and air. The vegetable world supplies the cellulose, mainly cotton fiber; the animal world gives the sour milk for casein; and the mineral world provides phenol and other chemicals. From the air comes nitrogen which is used in making brightly colored articles.

Generally speaking, there are two forms of plastics in use today: thermoplastics and thermosetting plastics. Thermoplastics, to which group Celluloid belongs, may be softened and remolded after they are formed; but the thermosetting plastics can never be recast or remolded. Bakelite is a member of the thermosetting plastic family.

Modern plastics, made from a soft mass, are cast and molded into various shapes. In the production of molded materials the liquid resinoid is allowed