The shops are perhaps as important as the chemical laboratories. Our present accommodations, although admirable as far as they go, are far too small. We hope the day is not far distant when the Institute shall have all the facilities it deserves for this part of its instruction.

Contributions.

Stained Glass.

II. ITS HISTORY.

The origin of glass-making is veiled in obscurity, but that it was known to the Egyptians in very early times is amply proven to us both by their hieroglyphics and some specimens which have been found in graves at Thebes. It is extremely doubtful, however, if they ever used it in windows, the climate of Egypt not calling for a protection from the inclemency of the weather, and all the pieces found being either ornamental objects or imitations of gems. This last shows that they possessed a knowledge of the coloring powers of the metallic oxides. The Chinese have also been acquainted with the art of glass-making from the earliest times, but they seem never to have developed the industry to any great extent, confining themselves, like the Egyptians, to the imitation of precious stones. Most of the glass used in China at the present day is imported. In Ashantee there have been found numerous glass beads, called by the natives aggry beads. As the country thereabout presents no facilities for glass-making, and as the natives possess no tradition regarding the manufacture of these beads, their occurrence there is accounted for by supposing the Gold Coast to be the Ophir of Solomon, and that they were carried thence from Tyre in large quantities as an article of commerce. The glain neidy or snake ring of the Welsh may also be noted. These are small opaque glass rings, usually of a dark-green color, found all over Wales. The peasants believe them to be shed by snakes, and to possess remarkable luck-giving properties.

They were in all likelihood, however, manufactured by the Druids, and used by them as fetishes of some kind to impose upon the ignorant. Lastly, at Pompeii and Heracleum fragments of sheet glass have been discovered; and at Pompeii, in a room attached to one of the baths, a window actually filled with colored glass was found. This window is the earliest known real glass window, and the fact of the glass being colored makes it especially interesting in the discussion of stained glass.

Having cited briefly the known examples of (so to speak) prehistoric glass, I will now turn to the first authentic accounts we have of glass-making. During the Roman Empire the great seat of glass-making was Tyre. Pliny tried to account for this by the trite fable of the shipwrecked sailors, attributing the invention of glass to the Phœcianians. The tradition is that a Phœnician ship, laden with "kale," an alkaline sea-plant, encountering a heavy storm, was obliged to seek shelter in the mouth of the river Belus, on which Tyre is situated. The sailors, wishing to cook some food, looked about for some stones on which to support their pot, but finding none, they used some of the ship's cargo. The fire under the pot caused this alkaline material to unite with the sand on the beach, and glass was thus unintentionally formed. The inhabitants of Tyre and Sidon, becoming acquainted with the fact, put it into practice, and established large glass works. This, though ingenious of Pliny, and a pretty fable, will hardly bear the light of modern science, since the temperature required for the combination of carbonate of sodium and silica is considerably higher than that necessary for the ordinary operations of cooking. Be this as it may, Tyre possessed exceptional advantages for the manufacture of glass, both geologically and geographically. The sand at the mouth of the Belus being pure silica, and the extensive commerce of Tyre affording ample facilities for the growth of such an industry as glass-making. From Tyre the manufacture was transferred to Rome, and then in turn to Venice.