

time." "I would admonish my readers to put aside for awhile the mere dreams and opinions of others who romance about these things, until they see that they are only philosophers on paper, not in nature, who have been taught by men like themselves, and with the same amount of learning, *to think by rote and not by experience.*"*

The chapters on brine, salt, saltpetre and vitriol, when divested of my *assumptions*, show a close acquaintance with these substances. His test for blue vitriol is one in use at this day, viz., its power of depositing copper upon a piece of iron. Paracelsus interprets this as the transmutation of iron into copper. "There is a fountain in Hungary, or rather a torrent, which derives its origin from vitriol; nay, its whole substance is vitriol, and any iron thrown into it is at once consumed and turned to rust, while this rust is immediately reduced to the best and most permanent copper by means of fire and bellows." This is a description of a process now in use for recovering copper from the drainage of copper mines and waste heaps.

He winds up his chapter on the sulphur of minerals with the remark, "Sulphur demands a very expert operator, not a mere boaster or charlatan." These latter are the words applied to himself by so many of his biographers!

These extracts show principally one side of Paracelsus,—the devout, ardent, patient student of nature. In his short tract on the *Composition of Metals* he reveals another and less attractive side. He describes *electrum* an impossible alloy of the seven metals, viz., gold, silver, iron, copper, mercury, tin and lead, made carefully at the conjunctions of the various planets; and, in discussing its virtues, writes as follows:— "There still remain in our age many necklaces and ornaments, such as rings, bracelets, remarkable coins, seals, figures, bells, shekels, made out of this, which of old were hidden in the earth. When they were dug up nobody, or very few, understood them, and in their ignorance they gilded them over, or tinged them with silver. It will be safest to pass over these matters in silence. Not, however, that we can altogether pass unnoticed certain stupendous effects of our *electrum*; since

*The italics are mine.