metals, and thus mixing them together, more intimate and pure alloys would be made than can be by fusion, and the mixture of these metals when melted, which never perfectly unites on account of the inequality of their specific weight, and many other circumstances which are opposed to the intimate and perfect equality of the mixture. As the constituent parts of the metallic vapours are in a much greater state of division than fusion, they would join and unite closer and more readily. In short, we should attain the knowledge of a general fact by this mode, and which, for many reasons, I have a long time suspected, that there is penetration in all alloys made in this manner, and that their specific weight would be always greater than the sum of the specific weights of the matters of which they are composed: for penetration is only a greater degree of intimacy; every thing equal in other respects will be so much the greater as matters will be in a more perfect state of division.

By reflecting on the vessels used to receive and collect these metallic vapours, I was struck with an idea, which appeared to me to be of too great utility not to publish; it is also easy enough to be realized by good able chemists; I have even communicated it to some