

Iron, again, is malleable to a degree which renders it most valuable as a material for fabricating all kinds of instruments for mechanical, domestic, or philosophical purposes; and it is capable of being hardened by well known processes sufficiently for the numerous and important works of the carpenter and mason, and the equally important purposes of war, agriculture, and the arts. A greater degree of malleability, in a metal employed for such purposes as those for which iron is usually employed, especially as this metal is very easily corroded by rust, would clearly have added nothing to its practical value: while its degree of ductility, which exceeds that of every other metal, combined with its capability of being hardened in various degrees, occasionally confers a value on it greatly superior to that of gold.

From the difference in the degree of fusibility of different metals, aided by the disposition which they have to unite so as to form an alloy, arises the possibility of covering one metal in a solid state with a superficial coating of another metal in a state of fusion. I am not aware that this method is employed, at least to any extent, in any other instances, than in the application of tin to the surface of copper or of iron: but, were there an hundred similar instances, they would

any acid which would dissolve the latter without affecting the gold itself.