Translation from Hankel, H., Zur Geschichte der Mathematik in Alterthum und Mittelalter

Starting on page 155:

[Note: This comes after a discussion of several of the "mechanical" constructions involved in solutions of the problem of the duplication of the cube.]

If these methods were to be applied practically, then instruments must have been found that would let each curve be described mechanically. It is very possible that, as is reported to us [footnote refering to Plutarch, Quaest. conviv. VIII, q. 2, c. 1 and Vit. Marcelli, c. 14, §5.], Plato, although he himself is supposed to have found an instrument for the solution of the problem in practice, disapproved of such instrumental and mechanical constructions, saying "because in this way the merit of geometry is spoiled; they [mechanical constructions] lead back to the standpoint of the senses, instead of leading to higher things and dealing with eternal and immaterial images." For, thoroughly discounting practice, Plato also speaks of mathematicians: "They speak in a very ridiculous and restricted manner. For they talk as if they are actually doing something when they say 'squaring' or 'applying' or 'adding,' while the whole subject is [actually] pursued purely for the sake of knowledge."

Viewed from this position, the great philosophers had correct convictions in this rejection of mechanical constructions. The problems that can be solved with only the compass and straightedge form a limited and known class, and it is of the greatest importance, in embarking on each new problem, to determine whether it is solvable with those instruments or not. This is the same as in algebra where one asks whether an equation can be solved using square roots or not. If the introduction of arbitrarily many instruments were allowed, then many important researches in this direction would not have been undertaken. We may then thank Plato for the restriction to these instruments, so important for geometry. The others, announced by their discoverers with much fanfare, are today forgotten, because they lost all higher scientific importance.