Summary: We present a formalism within which the relationship (discovered by V. G. Drinfel’d [in Algebra Anal. 1, No. 6, 114-148 (1989; Zbl 0718.16033), ibid. 2, No. 4, 149-181 (1990; Zbl 0718.16034)]) between associators (for quasi-triangular quasi-Hopf algebras) and (a variant of) the Grothendieck-Teichmüller group becomes simple and natural, leading to a simplification of Drinfel’d’s original work. In particular, we reprove that rational associators exist and can be constructed iteratively, though the proof itself still depends on the apriori knowledge that a not necessarily rational associator exists.

MSC:

16W30 Hopf algebras (associative rings and algebras) (MSC2000)
20F36 Braid groups; Artin groups
17B37 Quantum groups (quantized enveloping algebras) and related deformations

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