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**Short title:** Rational solutions for the Riccati-Schrodinger equations associated to translationally shape invariant potentials.

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**Review text:**

Having re-invented the Barclay's and Maxwell's classification [9] of translationally shape-invariant potentials in two classes (called here "categories", cf. definitions (86) and (88), respectively) and using the Gendenshtein's choice of variables [2], the authors complete the Kazimierz's project [8] and derive semi-explicit formulae for eigenfunctions [see eqs. (117) and (129)]. The idea is to expand their logarithmic derivatives (called here RS functions) into (terminating) continued fractions.