Switching in stand-by batteries

When riding a bicycle at night, electrical energy for the lights can be provided by a dynamo. However, when the bicycle is stationary, the dynamo produces no electricity and so the lights go out. Ideally, the light should use the dynamo when moving and the batteries when stationary.

The circuit shows a method of automatically switching the electricity supply from the dynamo to stand-by batteries. When moving, circuit A containing the dynamo will light the lamps. When the cyclist is stationary, circuit B will automatically light the lamps using the batteries.