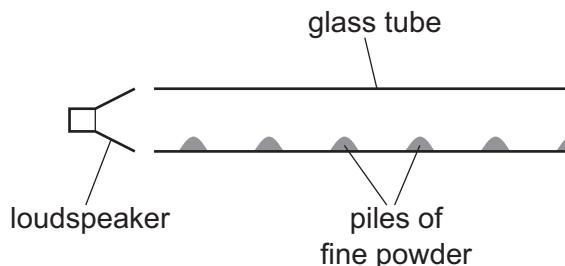


- 26 In an experiment to produce a stationary sound wave in air, a fine powder is initially evenly distributed along the length of a horizontal glass tube which is closed at one end.

At the open end of the tube, a loudspeaker emits a sound wave of a constant wavelength. A stationary wave is formed and the powder accumulates in regularly spaced piles, as shown.



Which statement explains the positions of the piles of powder within the tube?

- A The piles are where the air molecules vibrate with maximum amplitude.
- B The piles are where the air molecules vibrate with minimum amplitude.
- C The piles are where the air molecules vibrate with the highest frequency.
- D The piles are where the air molecules vibrate vertically.