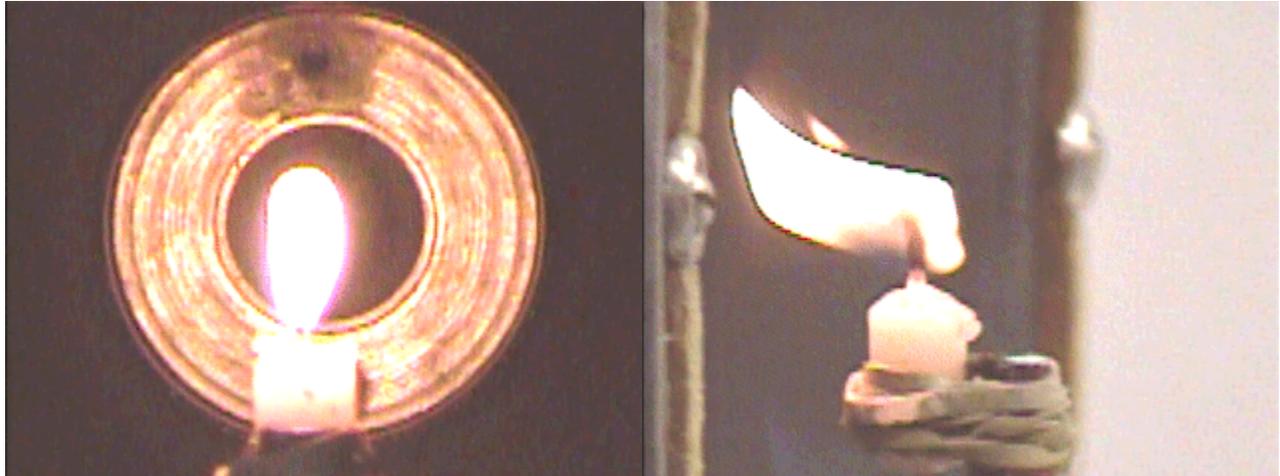


## Answer #242

The answer is (a): the candle flame will oscillate at the applied frequency in the direction along the axis of the speaker, as seen in videos that can be selected below.



Videos of this effect can be seen by clicking your mouse on the appropriate link below:

1. Side view at speaker resonance frequency, then setup rotated from side view to direct view toward speaker then back to side view: [mpg video \(5.6 MB\)](#) or [wmv video \(942 kB\)](#)
2. Front view at speaker resonance frequency, video zooms in on flame, and speaker is rotated from front to side view: [mpg video \(3.9 MB\)](#) or [wmv video \(715 kB\)](#)

Sound propagates as a longitudinal wave, so the motion of the medium (the air in front of the speaker) will be along the direction of propagation - directly away from the speaker along its axis.

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For questions and comments regarding the *Question of the Week* contact [Dr. Richard E. Berg](#) by e-mail or using phone number or regular mail address given on the [Lecture-Demonstration Home Page](#).