



Sharp Shooting

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The match has been ignited by the passage of a BB. The BB can be seen to the left of the match tip. The photograph was taken with the camera shutter held open. The sound from the gun caused the sound trigger to initiate the flash, thereby capturing the image. Combusting particles ejected from the match tip by the BB are clearly noticeable.

The ignition of the match can be explained by the principle of transfer of energy. Through the friction between the BB and the match tip, some kinetic energy from the BB is transferred into thermal energy. This thermal energy provides the activation energy which causes the chemical energy stored in the match tip to change into light and more thermal energy, thus producing a flame.