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## Jumping Behavior of Heald in a Shedding Motion of Loom

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**Abstract:** Noise in weaving mills has become very serious problem with increasing speed of weaving machine in recent years. One of these sources of noise is the collision sound of healds caused by shedding motion. It was clarified in our previous paper that the collision sound of healds is significantly connected with motion of heald during a period of shedding motion. In this research, therefore, photographs of the behavior of heald in a shedding period were taken by using a high-speed-camera system on a model shedding device. At the same time, noise was measured to investigate the collision sound of healds. Collision between healds and heald bar caused by heald jumping and the collision of healds were observed. It was confirmed that noise is the largest at the both collision timings. On the other hands, it has been already understood that the tension of warp yarn significantly affects the behavior of heald. It was also observed that the collision of heald and heald bar was delayed or eliminated with increasing tension of warp yarn by photographic observation. At the same time, noise was decreased with increasing warp tension.

**Key Words:** [Shedding motion](#), [Warp tension](#), [Heald](#), [Noise](#), [Weaving machine](#)

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